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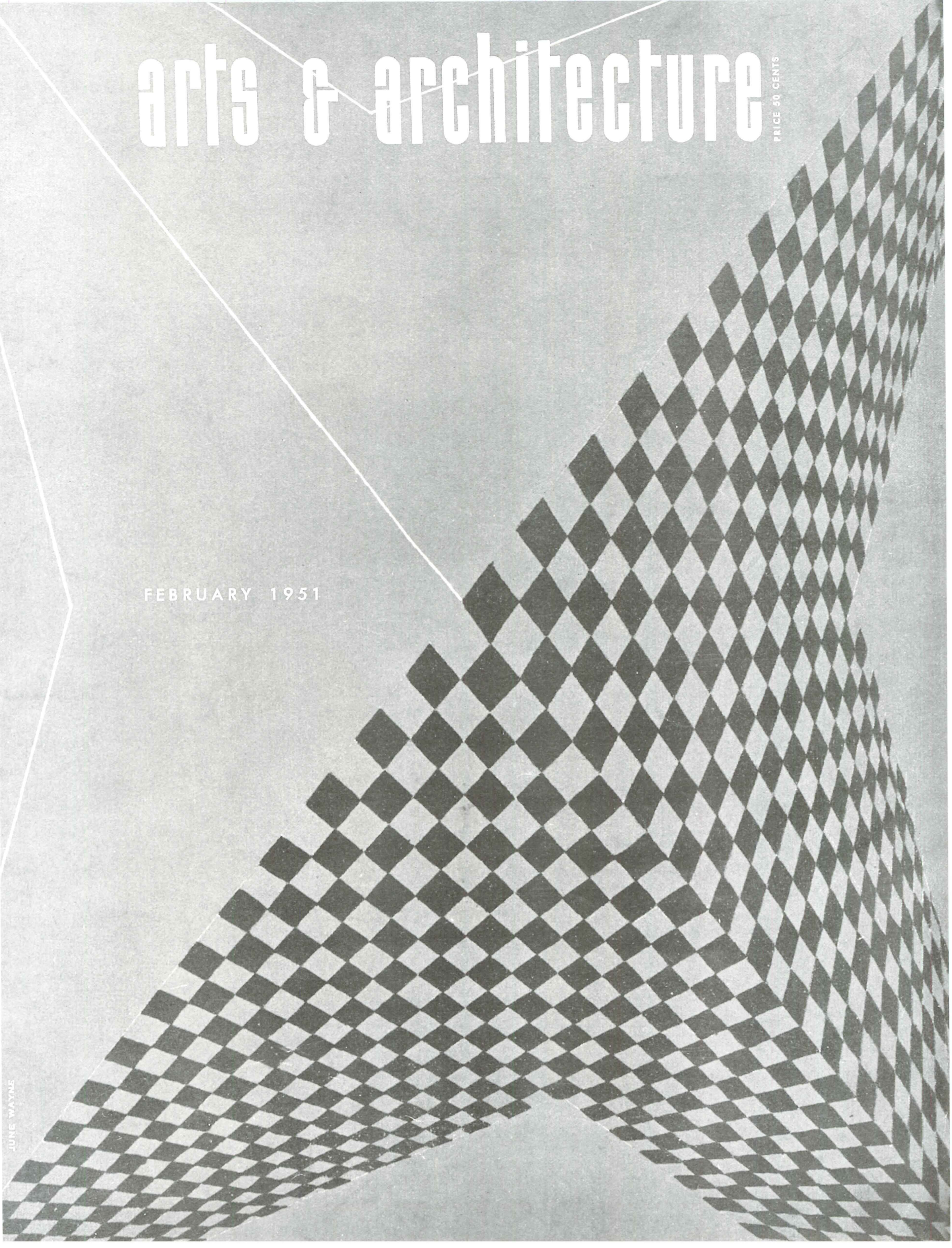

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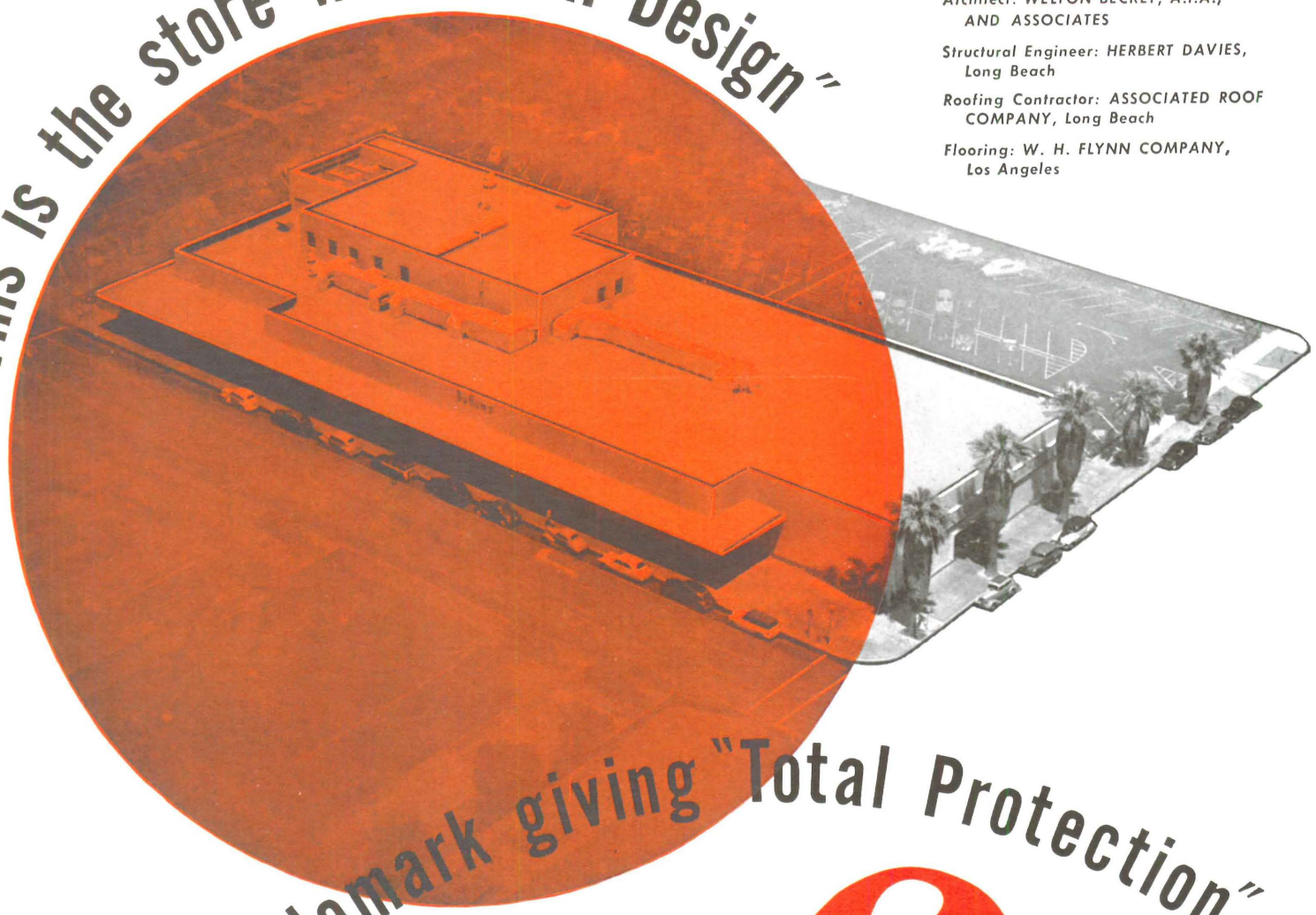

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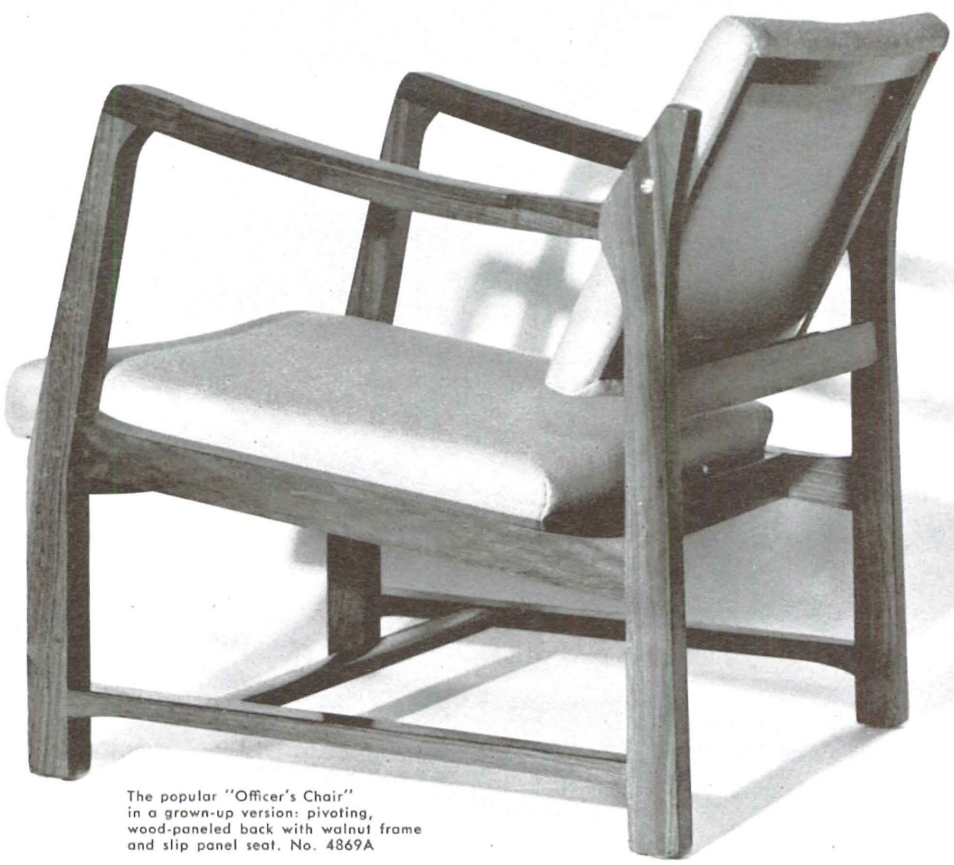

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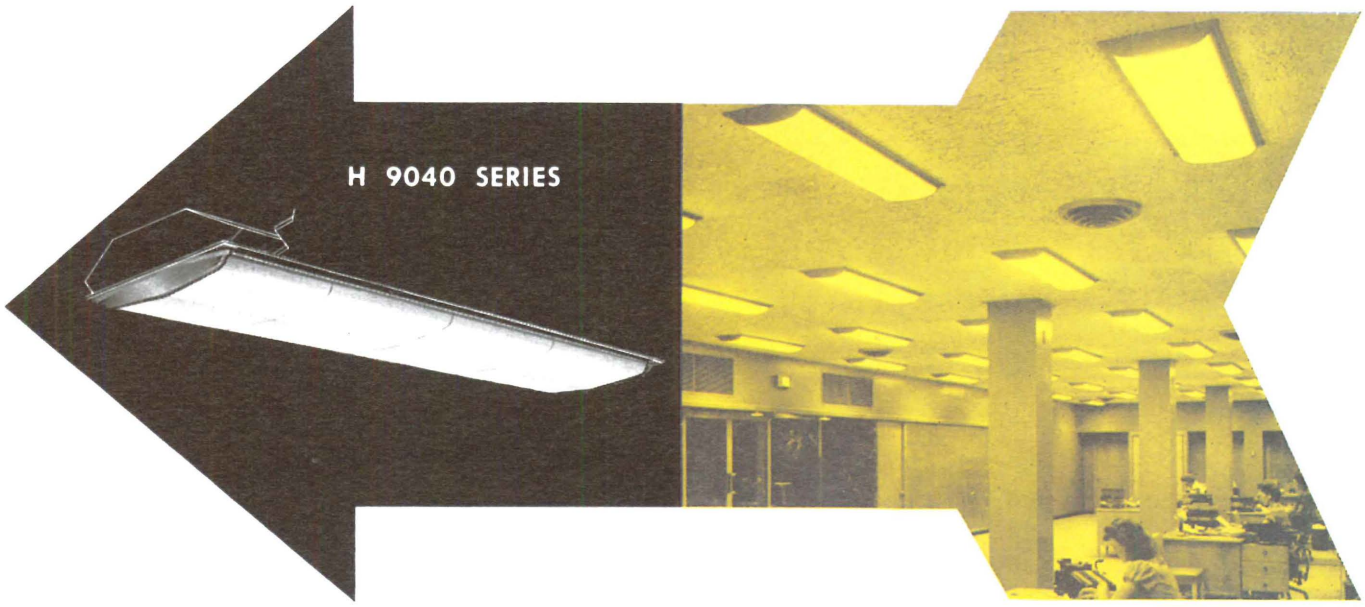

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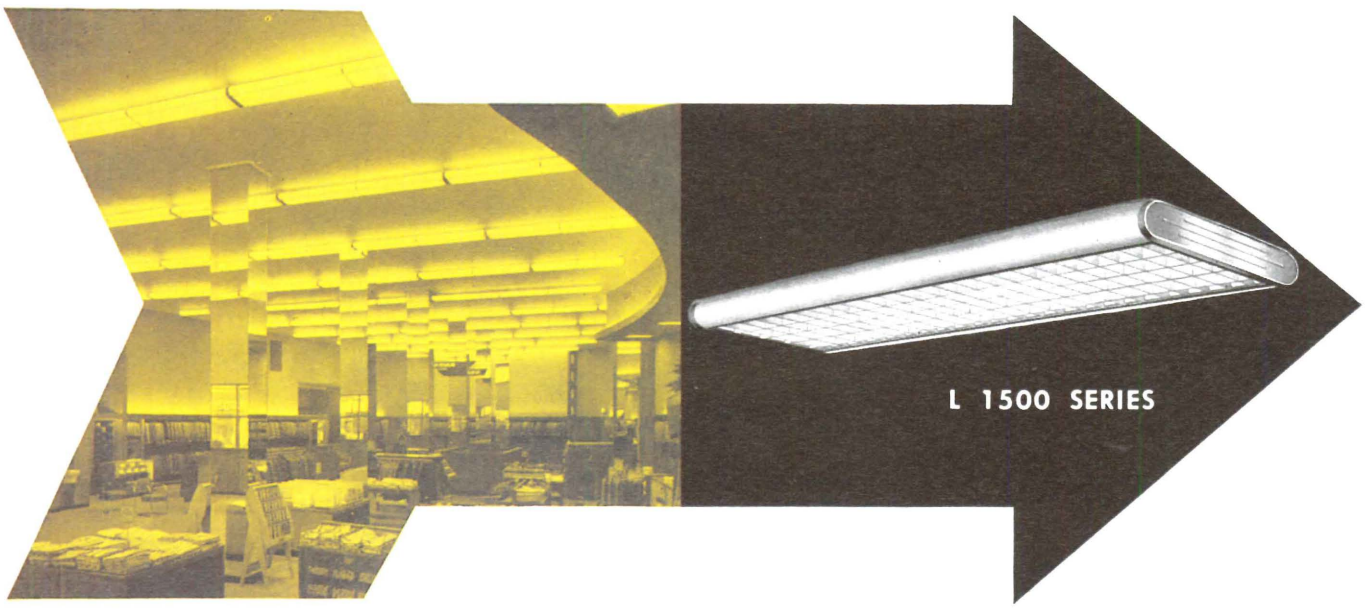

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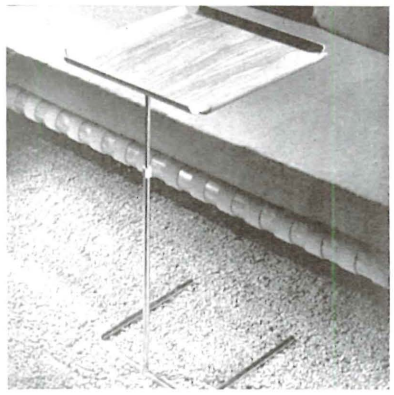

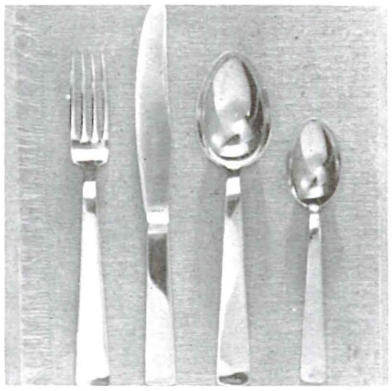

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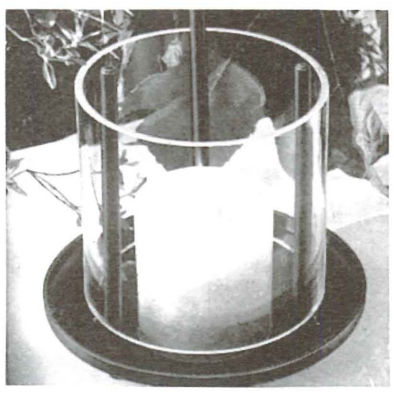

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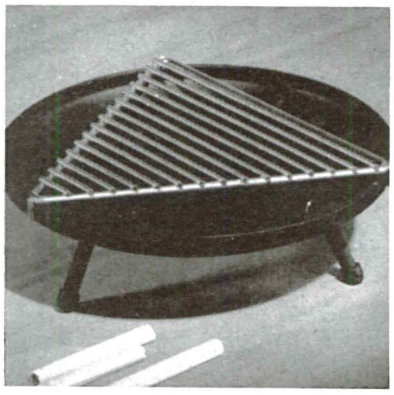

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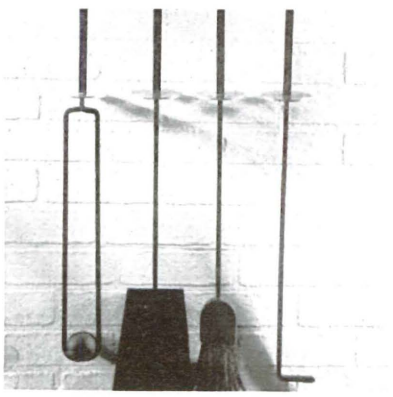

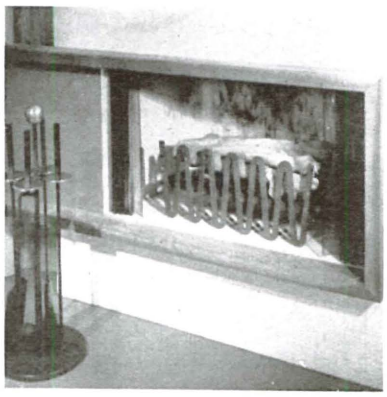

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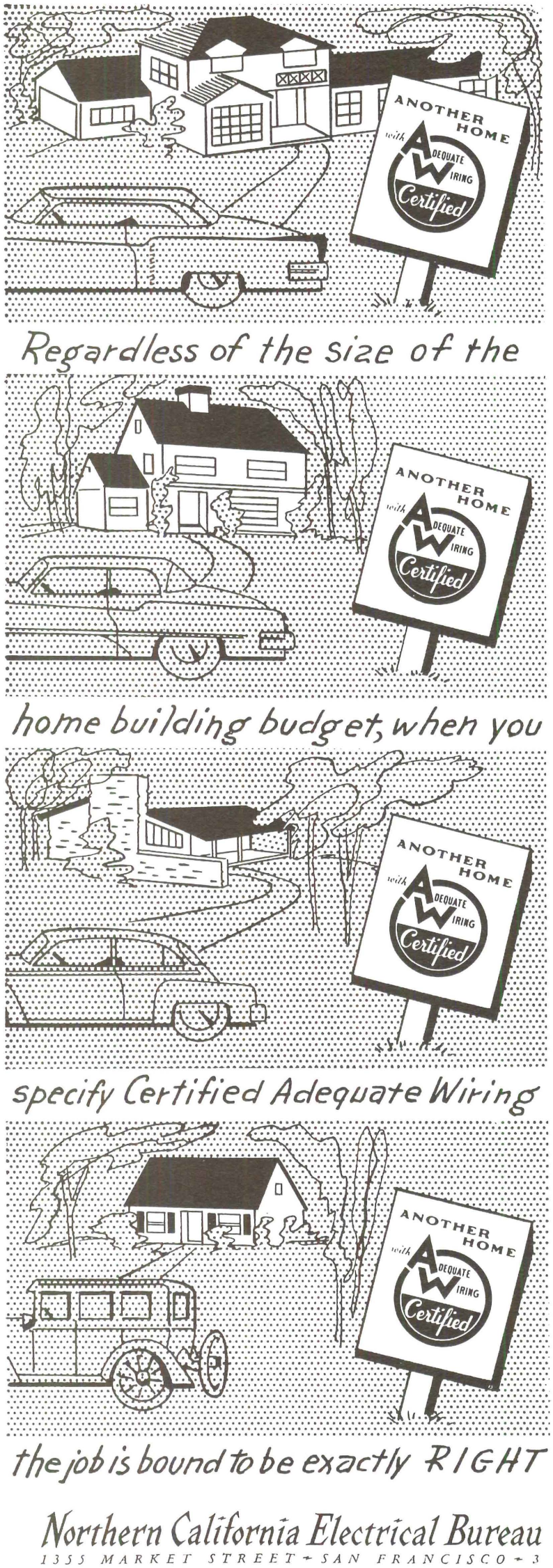

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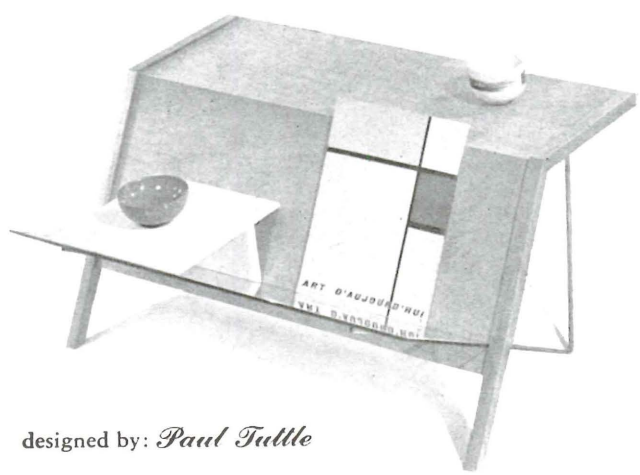
CINEMA

ROBERT JOSEPH

This is the time of the year for the beginning of that great motion picture marathon, the Academy Awards. These awards are meted out annually to a series of "bests," including acting performances, story, direction, production engineering, music, songs and other assorted technical and artistic activities. A rather complicated voting mechanism has been established whereby members of the Academy—some 1800 people—vote on the final Awards. Preliminary nominations are made by over 10,000 members of the industry who are not necessarily members of the Academy. In special categories, those dealing with highly technical achievements, nominations and final awards are voted upon by restricted committees suited to pass on the quality of the various achievements themselves. In principle there is nothing drastically wrong with the Academy set-up as far as nominations and Awards go. In the past there have been many striking awards made to pictures and people who were rarely given even as much as an outside chance. Several years ago, in fact, when England walked off with a flock of 'Oscars' for 'Best Picture' and 'Best Performance' there was a strong colony of protest from trade papers and some studios. In the past, too, the Academy was under the dark blight of having been manipulated by various studios to get awards.

The Awards themselves are desirable from several points of view. It is flattering to be acclaimed by fellow craftsmen and artists in one's own trade. And of equal, if not greater, importance is the fact that the Awards are worth a considerable amount of money to a lot of people. One film producer is reported to have said that an Academy Award for a picture means an additional million dollars at the box office. This is a round, wholesome sum which is of



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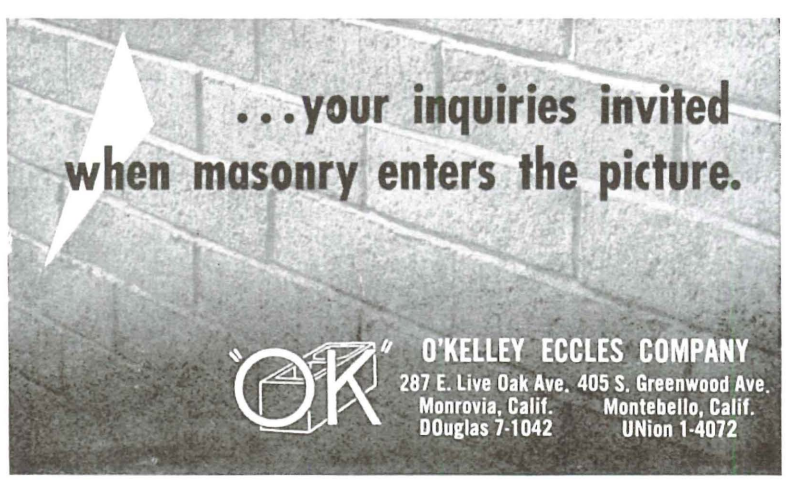

considerable interest to the men who are in the business of making entertainment for profit.

As far as individual performers and craftsmen are concerned, an Award can be a tremendous career-booster. An actress' or actor's salary can jump from $20,000 a picture to $100,000 a picture within a matter of minutes, if an award is forthcoming. And it has. There is also a lot of sentiment attached to voting awards. Several actresses, in fact, have been declared the winners by an overwhelming vote, accorded them by the voters on the basis of sentimentality and not on the basis of any performance excellence.

But these are all a reflection of human feelings and human attributes. Certainly one cannot look for perfection in an industry which operates on assorted principles of hysteria, cold business sense, sharp acumen, artistic merit and real genius. Human failing is bound to make itself evident in an industry which offers an award to a cartoon rodent and passes by a director of the imagination of say, Orson Welles or William Wyler.

But human considerations aside, there is a basis for asking, just what an Academy Award represents. In a great majority of instances the Award has represented a straw vote of mediocrity. Rarely has the pioneer film, the experimental film, the film of innovation in treatment or theme been given serious consideration. An exception like John Ford's "The Informer" proves the case. For then the Awards are given out to those pictures which follow the general pattern of what has gone on the screen before, the 'sure thing.' Of course, there have been exceptions. "The Best Years of our Lives" was a tremendous picture. So was "Citizen Kane," "A Walk in the Sun," "Long Voyage Home," "Intruder in the Dust," among many others—none of which came near winning awards. The naming of these is not a matter of personal choice on the part of this writer, but a reflection of the fact that these and other pictures were mentioned repeatedly by film reviewers and critics all over the country as being outstanding films for their respective years.

The Academy Awards have, unfortunately become popularity contests. The late Douglas Churchill, Dean of Hollywood correspondents and representative of the "New York Times" once remarked that the only difference between an Academy Award Event and an Atlantic City Beauty Contest was that the men didn't show their legs. The Academy Awards Event is broadcast to the world by radio and press, and I believe that the filmgoer in Bagdad, Budapest, Berlin or Bjornesholm must wonder why Hollywood overlooks "Bicycle Thief" and pins a medal on a lovely-legged song thrush. It is true that Academy rules restrict awards to American-made pictures and certain foreign pictures officially admitted to the contest by complicated rulings. But often American performances and films suffer by comparison. It is also unfortunate that American pictures which don't get a chance are hailed by foreign awards committees, as happened in the case of "Home of the Brave," which won an award at a recent Brussels Film Festival, and wasn't even in the running in Hollywood.

The Academy Awards have been found to be profitable, which is a serious consideration, and they have done much to bring some of the Hollywood message to the world. Although from time to time studios which express disappointment at not winning anything have threatened to withdraw support, the Awards continue from year to year because this is what Hollywood wants. One must question on a fundamental basis the wisdom of an industry patting itself on the back, and compare the seriousness with which the international public accepts Nobel Prizes and Pulitzer Prizes and New York Critics Awards and gives a shoulder shrug to Hollywood's opinion of itself. If the Academy Awards Event is partially designed as a public relations builder, there is room for considerable doubt about how effectively this job is done.

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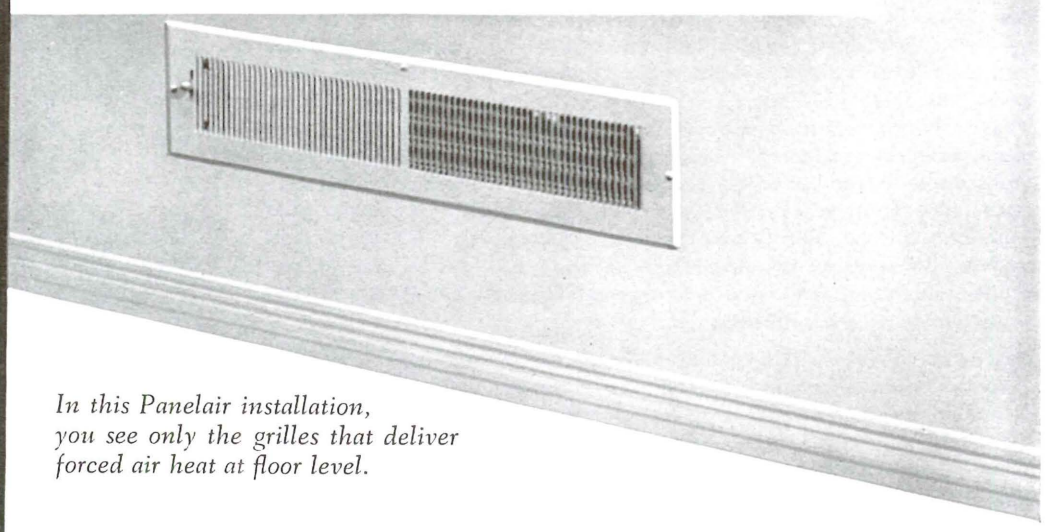

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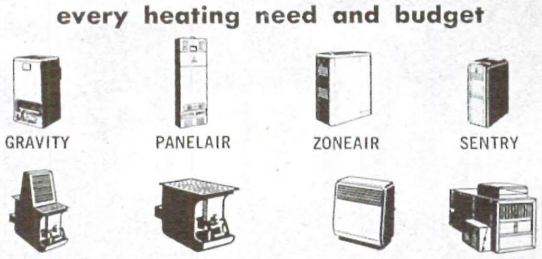

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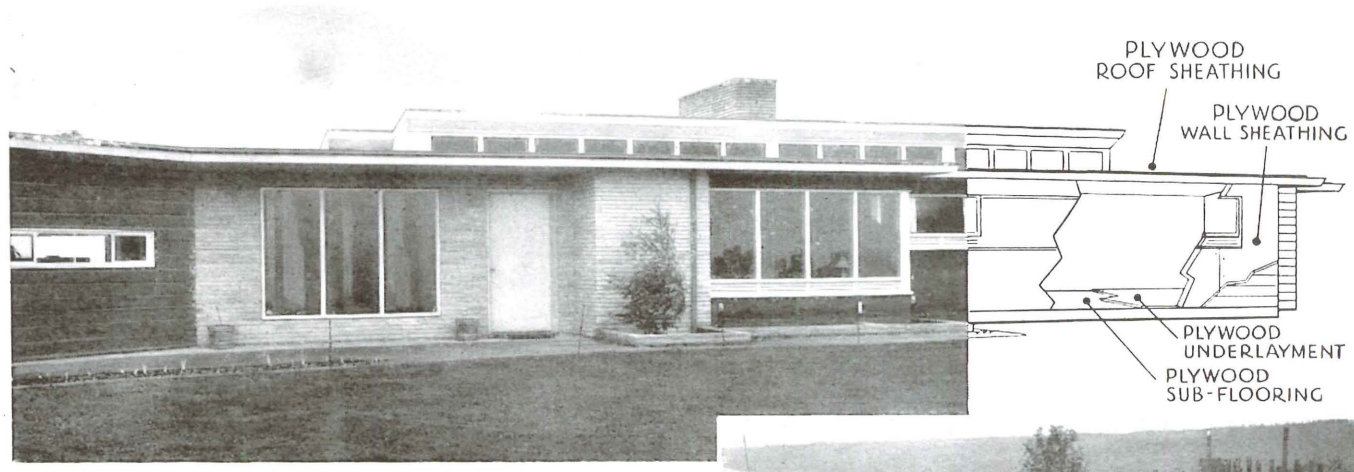

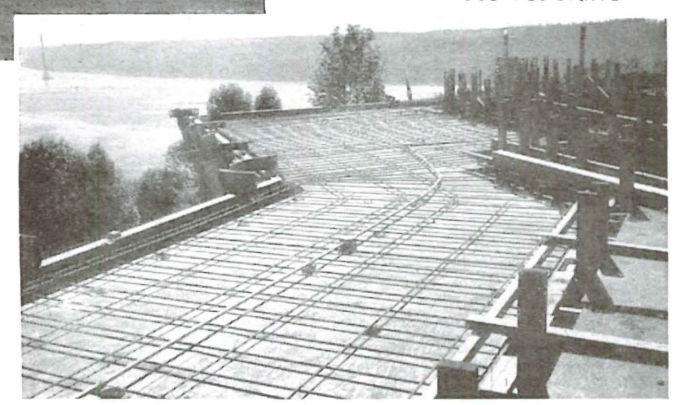

Right: Plywood forms in place preparatory to pouring porch deck which creates an overhang for terrace below. Big, versatile plywood panels were also used to form smooth surfaces for basement and foundation concrete—then re-used for sheathing and subflooring. Wall sheathing and subflooring is ⅝″ thickness. Roof sheathing is ½″. Owner-designer is Charles T. Pearson of the architectural firm of Lea, Pearson and Richards, Tacoma.

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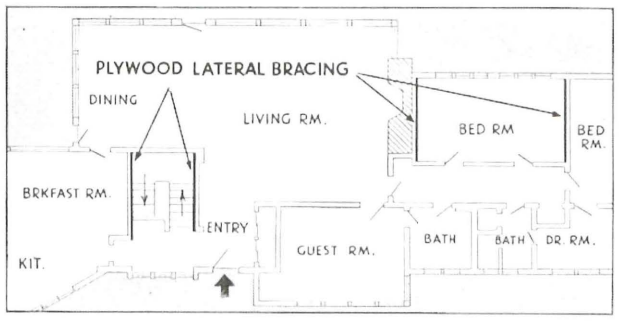

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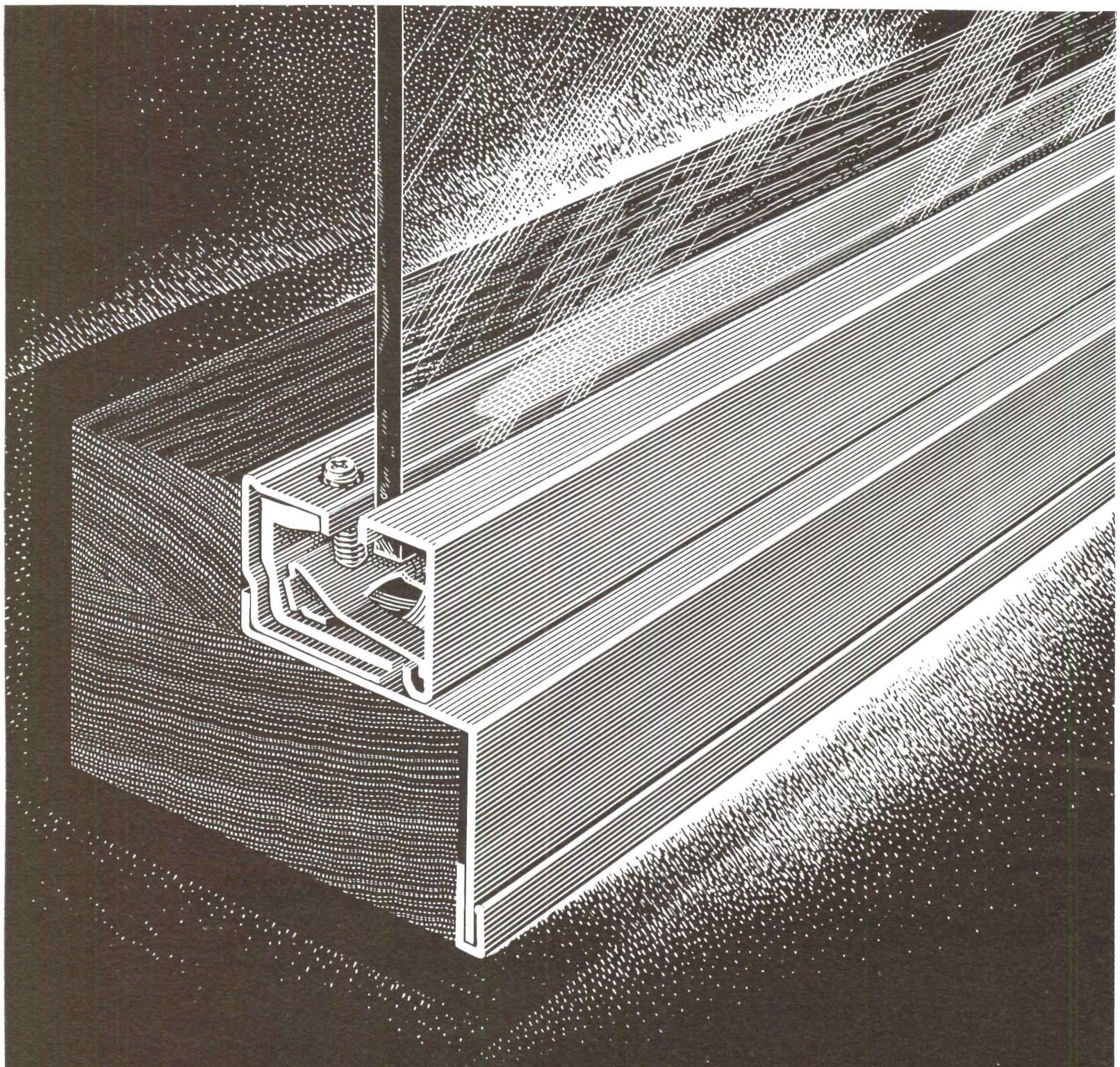

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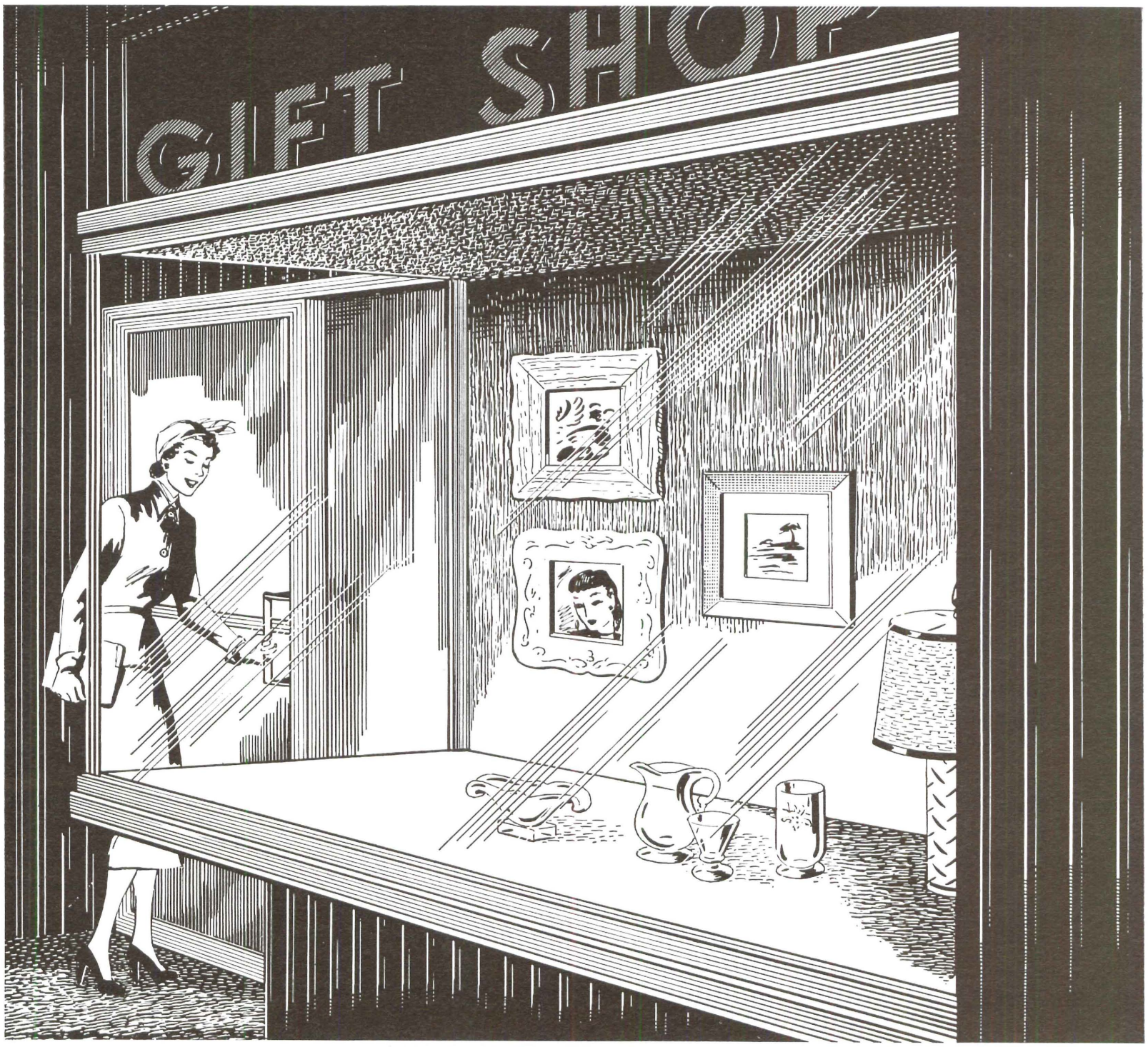

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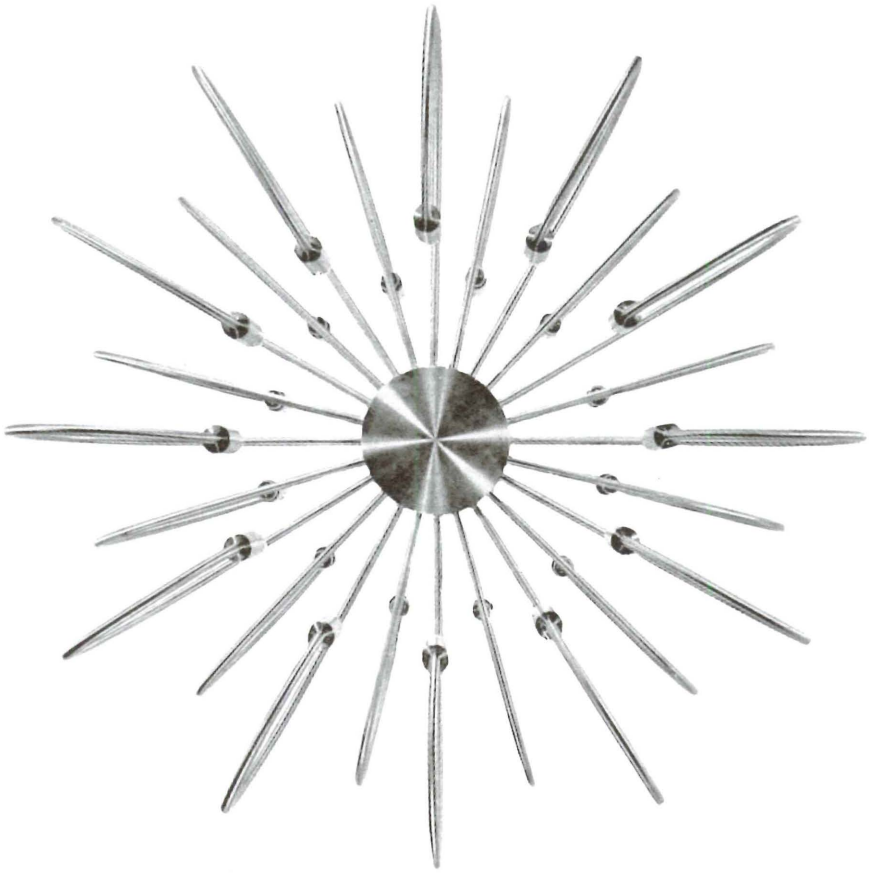

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MUSIC

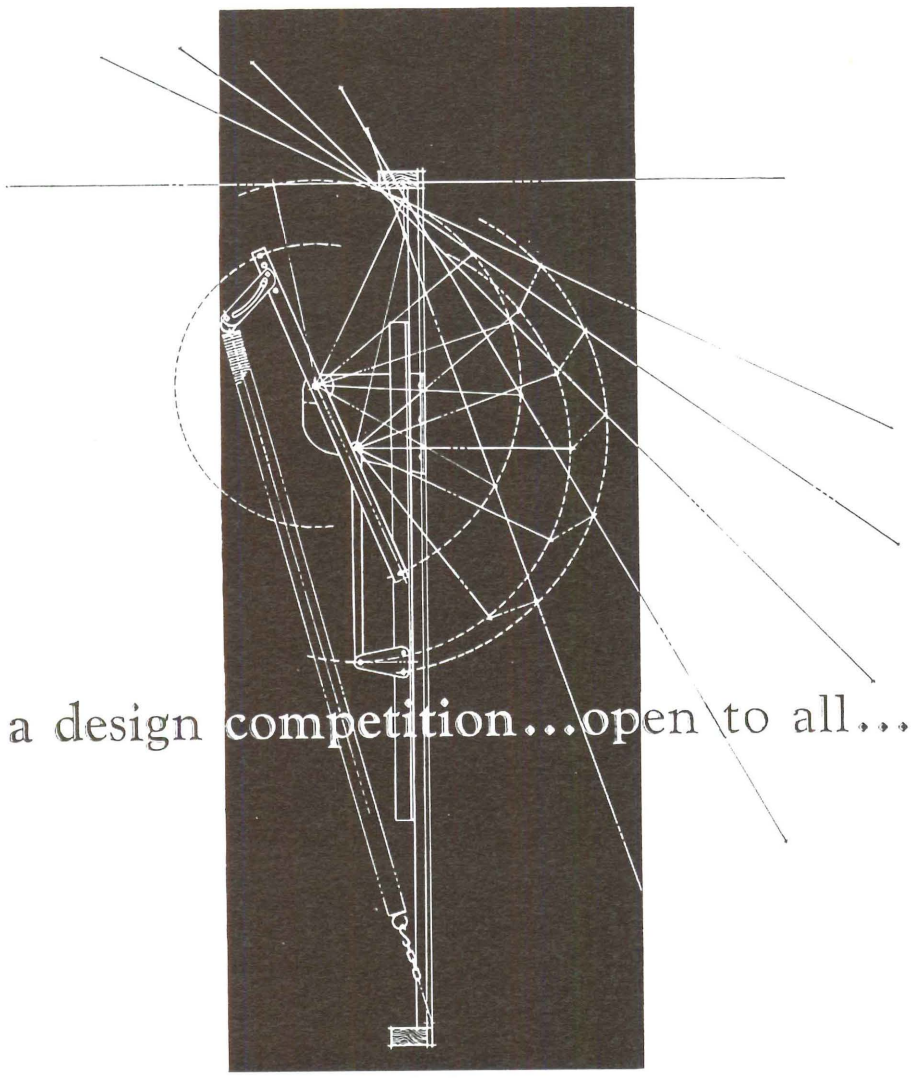
PETER YATES

MUSIC FOR THE KEYBOARD: THE LEAST KNOWN REPERTOIRE

For a good many years I have been sitting down at the piano once or twice a week to read with numb-fingered determination, two to four hours at a time, the repertoire of music for the keyboard (organ, clavichord, harpsichord, piano: what the German language calls **klavier**). Unlike most amateurs, students, and nearly all professionals, I do not devote weeks, months, years to perfecting a small group of favorite compositions. Two or three sonatas by Haydn, one or two of Couperin's **Orders**, a Bach Partita and a group of smaller pieces; or a dozen pages by Byrd, some Frescobaldi, a pair of Purcell suites, a ground by Blow; or a set or two of Mozart or Beethoven variations, going back to Pachelbel, Buxtehude, Chambonnieres. Once in a while I read twentieth century music, usually Bartok, or take out of the library what is there available of C P E Bach—no good edition is presently on the market. The larger repertoire, though I have read most of it, I leave to my wife; and I must confess that, though I know them intimately by her playing, I have never managed to get through the Schoenberg **Dance Suite** or the Ives **Concord Sonata**, Ravel's **Gaspard de la Nuit** or Bartok's **Im Freien (Out of Doors)**. I encroach upon her repertoire, while she improves on part of mine. The music she plays was intended to be performed, while a good part of what I play was intended to be read.

These are the two main divisions of the keyboard literature: music to be performed and music to be read. Music to be performed is a relatively new development, which appeared at the time when the focus of music-making shifted from the church and private residence to the public stage. Music to be read comprises the much larger literature of what is generally called, in naive indifference, pre-Bach music; nearly all of Bach's keyboard music and that of his sons, Haydn, Mozart; and Beethoven's piano music up to about the time of his extreme deafness, when he could no longer hear well enough to play.

Interest in the larger repertoire of readable music has been hampered by the practice among teachers, students, and performers of preparing all music as if for the concert stage, by memorizing it and smoothing away its difficulties. Grooved performances of this sort make things easier for the player as well as for an audience; they can be very memorable, when they are the resultant of a lifetime of concert experience. They become individual creations, molded of the music. The succeeding generation criticizes them all too easily, as it criticizes many splendid designs and conveniences of the generation that came before it. But the habit of memorizing music has replaced the ability to read it with fluency and idiomatic expressiveness; the tendency to think of all music as existing only in the presence of an audience has driven out the pleasure of reading it as one reads poetry aloud not for others but for oneself. That was a world of keyboard giants, the galaxy of pianist-composers which began with Liszt, following close upon the other galaxy of composer-pianists which ended with Beethoven, Schubert, and Chopin; but they stood the art of music on its head, legs and arms prominently waving. Leaders of music no longer composed the works they played. The skill of extempore composition reached its height with Bach, his son Philip Emanuel, Mozart, and Beethoven, any one of whom might draw without premeditation two hours of close-wrought music from a single theme. "Sebastian Bach at length acquired such a high degree of facility and, we may almost say, unlimited power over his instrument, "Forkel relates," . . . that difficulties almost ceased to exist for him. As well in his unpremeditated fantasies as in executing his compositions . . . he is said to have possessed such certainty that he never missed a note. He had, besides, such admirable facility in reading and executing the compositions of others . . ." And we are given to see, as all composers up to the time of Forkel took for granted, that the playing of compositions by others was altogether secondary to making one's own music. Extempore improvisation dwindled rapidly during the lifetime of Liszt. Today it survives as a freak of public ex-



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hibition, in set patterns, and is a prodigy if it lasts ten minutes. But the masters of improvisation were also the first to study the previously little-known repertoire of their instrument.

We are poor today, who can load our shelves with printed replicas of the five centuries of keyboard music. Bach quarried from the art of his predecessors, Frescobaldi, Froberger, Pachelbel, Fischer, Couperin, Buxtehude, Vivaldi, Kuhnau, a style, a medium, a technique, impersonal and durable as marble, yet able to accommodate the intimacy of his family mind or the utmost dimensions of his theological vision. The drama of the fall of man he compressed into a dissonant drop between two chords, usually unheard on the modern organ; the passion, the entombment, the resurrection, and the flight of angels; a serenity which without denying or abating one jot of human suffering does not need Beethoven's offset of struggle. And Beethoven, in the midst of his exuberant creativeness, wrote, "Send me the works of the Bachs." The course of Mozart's flight was checked and changed direction by the discovery of Bach. Today our knowledge of Bach's keyboard music is confined to a few incorrectly played adaptations.

Then came the three generations of the virtuosi, their creative genius stifled by the overwhelming discovery of what had been already made. Wagner weeping while Liszt recited Beethoven's **Sonata Hammerklavier** or dancing to the finale of the **Seventh Symphony** as Liszt brought it from the solo keyboard. Tausig in a frenzied youth memorizing the entire classic and modern literature and dying at 29, exhausted by the effort. Buelow playing in sixteen programs the complete piano works by Beethoven and all of Brahms' piano music at a sitting. Brahms himself revising Couperin and bringing to performance the Beethoven **Diabelli Variations**. Busoni adding his name indeliby, if as some think a trifle impertinently, to that of Bach, making live again in sound the formal pages of the **Bach Gesellschaft**.

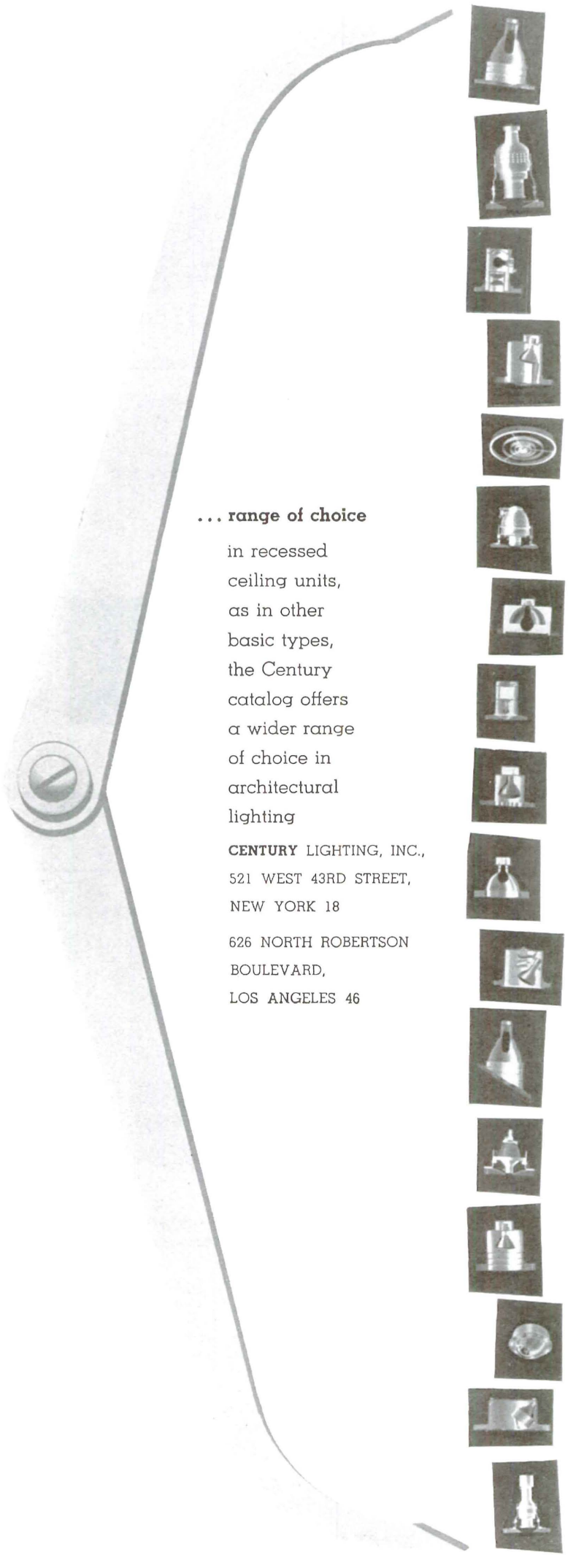
Our own time has exploited these individual labors. The mechanical player for which Haydn, Mozart, and Beethoven wrote with curiosity has become the monarch of our musical life, first the player piano, then the phonograph and radio. An art confined at its best to a few cities has become the anonymous possession of the entire world. Kalmucks and aborigines, jaded western sophisticates and new oriental devotees can hear, regardless of tradition, the finished surfaces of an art becoming all too finished. In the momentary excitement are seeds of rapid dissolution. The adventure which has been possible only in our lifetime, the emancipation of musical experience which has moved by successive stages from Tetrazzini, Caruso, and the **Lucia Sextet** until now it comprises nearly the entire literature, will not be the same for those who are beginning today to listen. It will seem to them that there is nothing left to master or discover. If they are wise, they will turn as amateurs to making music for themselves, recapturing the feel of the music-maker, the personality of the instrument.

To do so is to save oneself in part from the glut of ears. And the amateur who can read at the piano is in one way fortunate. Although the repertoire of symphony, concerto, and chamber music, as well as the smaller literature of the various accompanied solo instruments is now nearly all recorded in performances of discouraging finesse, the greater part of keyboard music is not yet on records.

Nearly all of this music has been recently reprinted. The fifty-two sonatas by Haydn in the Peters edition are reissued, with that curious editorial emendation which substitutes an accent for the short appoggiatura—like putting dashes for all semi-colons. The first one hundred sonatas (vols. I & II) of the Longo Scarlatti are in the stores with the remainder promised. Here too the editor has muddied the waters, substituting his own improvements for Scarlatti's "mistakes," eliminating the colorful **acciaccaturi**, which the editor thought unsuitable for piano. In a footnote the editor has shown one of the "mistakes," an unexpected chord in the middle of a measure, drawing the lines together into a brief arpeggiated cadenza.

The **Fitzwilliam Virginal Book**, greatest of all keyboard collections, and other editions of Elizabethan keyboard music, Frescobaldi, Pachelbel, a recently discovered volume of suites and variations for harpsichord by Buxtehude, heretofore known almost entirely by his works for organ, the Mozart ur-text, the complete Schubert have been reprinted.

Entering the domain of early keyboard music one should not at



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first expect too much. Except smaller dance pieces, like those by Farnaby, one will not find the music charming. The larger the composition the less one may be disposed to like it. As recorded it is usually earnest but dull, empty, or sprightly. Let me assure you that personal acquaintance with early keyboard music in its infinite variety will soon break through these impediments. This music does not tell you how it should be heard; instead it provides the materials by which through your own feeling for line and texture, melody and ornament, you may make it your own. The modern piano warns with it; modern technique stumbles in its passages: the instrument can be commanded, the technique developed. Once you have gone so far you will not turn back.

Many smaller groups of selections may be had, some excellent, some vicious. Among these volumes of selections there is too much duplication, too little enterprise in bringing forward new material. It is the rare edition that has not been devastated by some learned obscurantist, condescending to the buyer for the sake of a publisher's copyright. What improvements scholastic nonsense has not foisted upon Bach! Here is a group of selections from the **Notebook of Anna Magdalena Bach**, including Bach's single example of the correct way to play his ornaments; but the editor has dishonestly rewritten the examples to show all the trills played from the main tone instead of the tone above. Editors have cleared up Bach's graphic visual indications, substituting for them a "clear" modernized notation. Recently I came upon a handsome German edition of the Bach suites, with a foreword explaining how the editor has rewritten them for modern eyes. Here is a sustained arpeggio, showing in Bach's notation how the successive tones move through the extended body of the sound; the editor sets beside this his own notation, merely indicating an arpeggio. Bach certainly and earlier composers generally did not write so many notes for no purpose. Here is a set of repeated chords, Bach's notation showing how a vibrato effect is obtained by breaking the tones in interlaced pairs; beside this the editor records his own improvement, eliminating the vibrato by printing only the repeated solid chords. Musicologists

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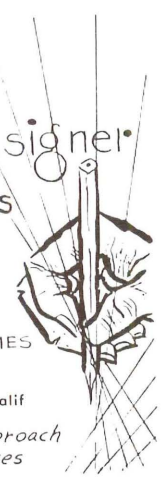

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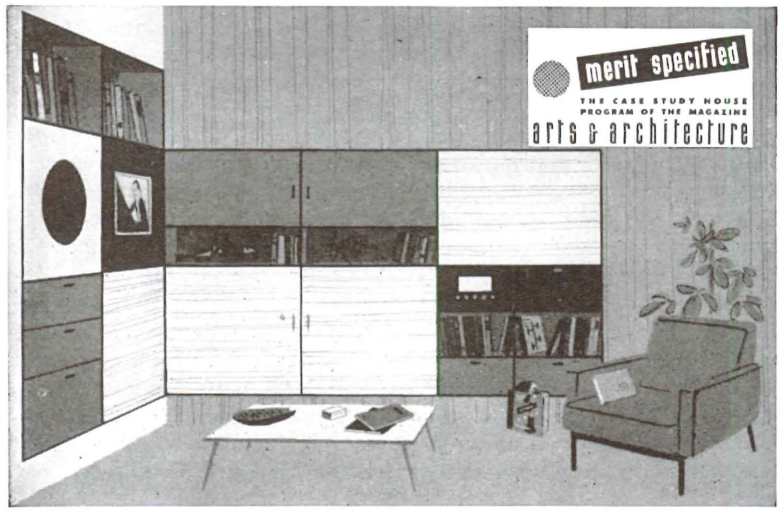

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should either begin a thorough study of XVIII century notation or else admit that they know almost nothing about it.

For a beginning study of keyboard music before the time of Bach two collections stand out above all others. **Music of Early Times**, edited by Willi Apel, published by Schott, coverse the XIV to the XVII centuries. **Early Keyboard Music**, a fifty-year-old assemblage of several earlier European editions, published by Schirmer, is still the best collection from the XVII century and, except Bach and Handel, the early XVIII century. The latter contains a good many errors that have been corrected in other more recent editions, but these are of slight importance in comparison with the general breadth and excellence of choice.

Most keyboard music until the later, larger works by Beethoven and Schubert was intended to be read. In the XVII and XVIII centuries the reading of music at sight was an art ranked only below improvisation. To rediscover this art, to make oneself at home in it, one must learn to play with eye and ear directly to the hand. Couperin recommended memorizing as a part of the training of students, not for exhibition but for practice. One should have Dolmetsch's **Interpretation of the Music of the XVII and XVIII Centuries** always conveniently at hand for reference. And do not be discouraged by it or try to swallow the entire compendium at once. Above all, even when played incorrectly, as it usually is, this music should be played with freedom, the horizontal voices independently singing their own melodies, the harmonies interwoven rather than struck vertically as chords. The general plan of the embellishments should be mastered, and one should learn to recognize the different signs used at various times to indicate similar effects. When one has learned to read the original ornaments, any manner of writing them out will seem an encumbrance, requiring a double interpretation, first to the original ornament and then to the proper way of playing it. After all this is one's own music, and one can soon be more at home in it than any dashing piano exhibitionist who has devoted his career to perpetrating sound effects.

The greater part of later XVIII century keyboard music is still a fresh field for any amateur who will learn to read it. Bach and his sons, Haydn, Mozart's and Beethoven's smaller variations, offer inexhaustible delight and amusement to the loving, irreverent reader who seeks the companionship as well as the grave face of genius.

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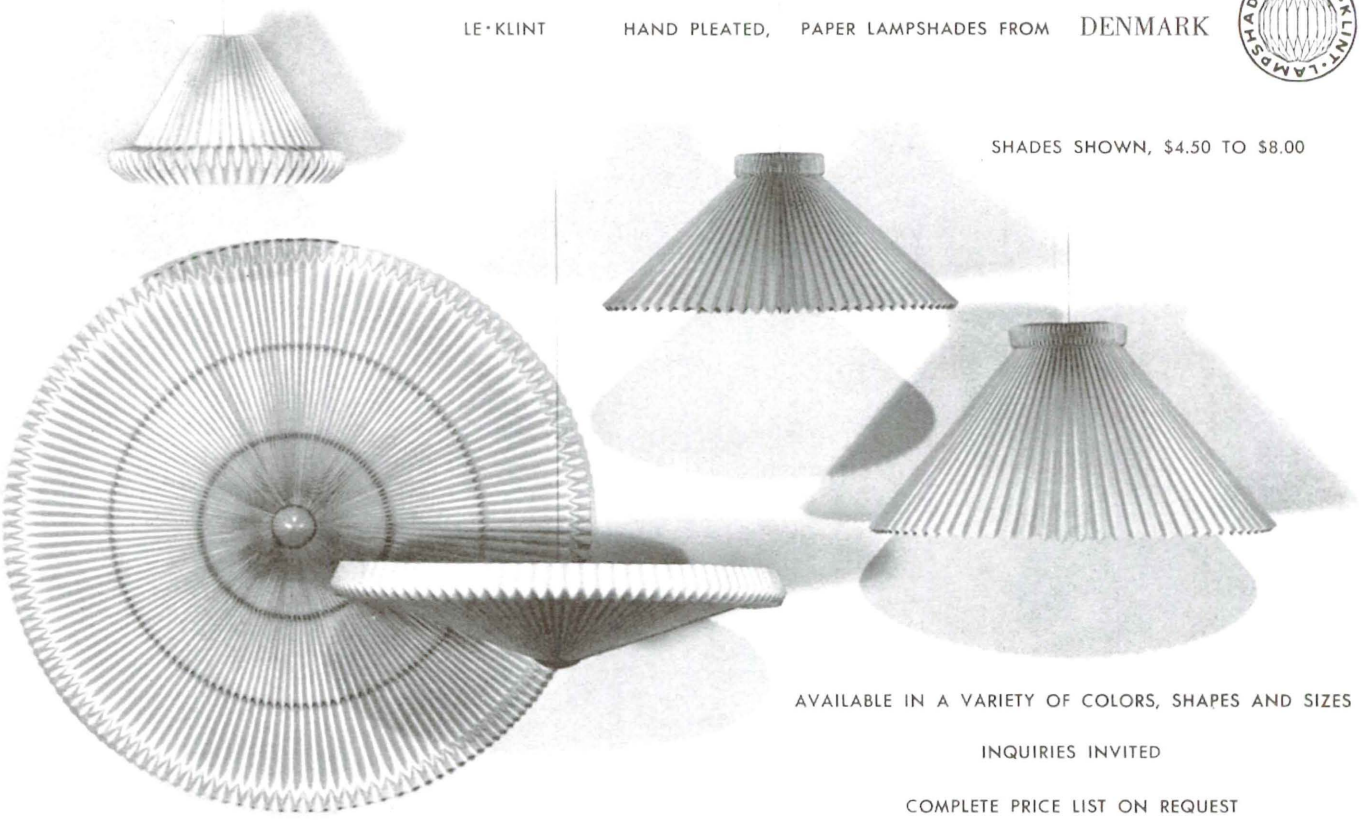

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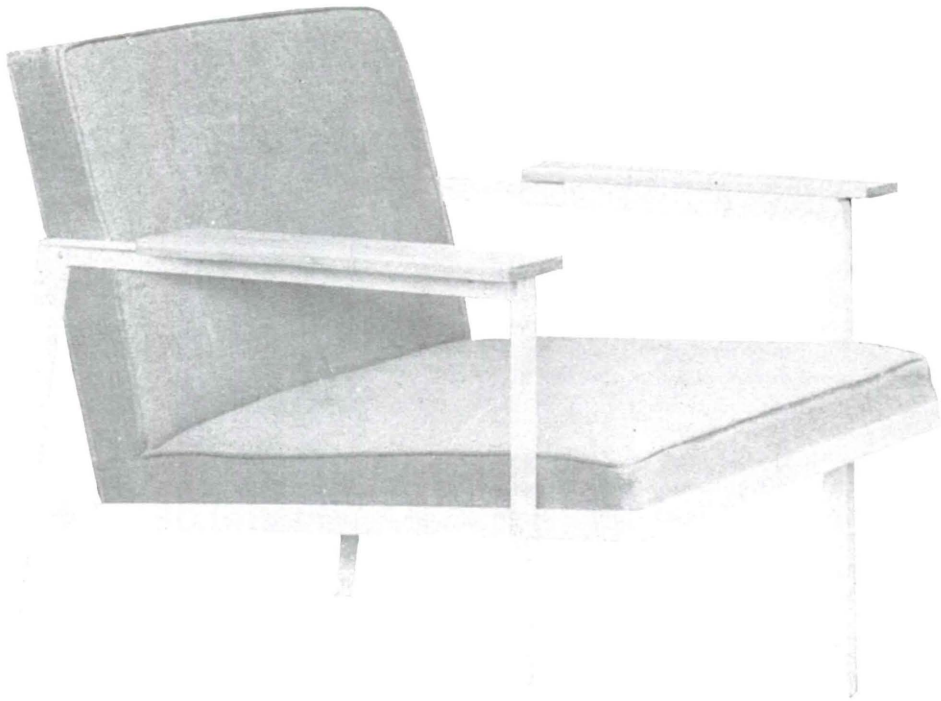

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in passing

Two years ago the General Assembly of the United Nations, meeting in Paris, adopted the Universal Declaration of Human Rights.

Can we say that the existence of the Declaration has in any way changed our mode of life during these two years? Some people will point out regretfully that it has not prevented breaches of the law, nor the resort to violence, nor the stagnation of certain political and social conditions, Undoubtedly, the criticism is justified. But is it reasonable to expect that any Declaration, however nobly inspired, could at once solve all problems?

The main role of the Declaration is, in fact, to help all men foresee a future toward which the governments can guide their activities in a common endeavour. If at times the cruel irony of events makes us doubt the sincerity of the Declaration as a splendid affirmation of principles, let us not forget that it provides the basis of the concrete activities already undertaken by the United Nations on behalf of Human Rights. Let us bear in mind that it has played a part in the judgment of not a few courts of law; and that inevitably its influence on morals and opinions, already great, will be more and more directly felt, even in the field of law-making.

Human Rights Covenant

The United Nations is now working on an International Covenant of Human Rights which, unlike the Declaration, will have binding force on all the signatories. This Covenant will be the first document of universal scope to establish a common pattern for the attitude of States toward private citizens. Naturally, therefore, its importance will be enormous. But we should not be led by this fact to forget the great value inherent in the Universal Declaration of Human Rights.

There are, no doubt, some people who may be tempted to believe that the Declaration should have begun with a strict definition of the minimum commitments which states should and could undertake, instead of with an affirmation of principles. But, had this minimum been fixed, the states might have contented themselves merely with showing the boundaries beyond which barbarism could not pass. A proclamation of the ideals which clearly and positively establish the frontiers of civilization might have been postponed until a remote future.

Chart For The Future

For example, would a simple agreement on commitments have included articles on social security, on the right to education and culture; and would it have given them coercive force? How many countries would have been able to undertake such commitments? Let us not forget that all nations have not reached the same stage of economic development, nor have they all the same cultural and social traditions.

Let us bear in mind, too, that this Declaration, which charts so bright a future for mankind, was adopted on the morrow of atrocities whose barbarism awakened our generation from its mood of complacency. To proclaim Human Rights was to propose a positive civilization: it was to affirm that mankind has enough confidence in such a civilization to overcome the difficulties in its path, and to survive.—J. T. B.

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The architect of 400 years ago was the comprehensive harvester of the potentials of the realm. The last 400 years have witnessed the gradual fadeout of feudalism and gradual looming of what will eventually be full world-industrialization—when all people will produce for all people in an infinity of interesting specialized continuities. The more people served by industrialization, the more efficient it becomes. In contrast to the many negative factors inherent in feudalism, such as debt, fear, ignorance and an infinite variety of breakdowns and failures inevitable to dependence on the vagaries of nature, industrialization trends to "accentuate the positive and eliminate the negative" first by measuring nature and converting the principles discovered in the measurements to mastery and anticipation of the vagaries. Day and night, winter and summer, fair weather or bad, time and distance are mastered. **Productive continuities** may be maintained and forwardly scheduled. There are three fundamental constituents of industry; all are positive.

The first consists of the aspect of energy as **mass**, inventoried as the 92 primary chemical elements which constitute earth and its enclosing film of ever-alternating liquid-gaseous sequence.

The second fundamental component of industry consists of energy but in a second and two-fold aspect, i.e.: (a) energy as **radiation** and (b) energy as **gravitation**, of both of which we are in constant receipt from the infinite cosmic fund.

Third and most important component of the industrial equation is the intellect-factor which secretes a continually amplifying advantage in experience-won knowledge.

Complex-component number one cannot wear out. The original chaotic disposition of its 92 chemical elements is gradually being converted by the industrial principle to orderly separation and systematic distribution over the face of earth in structural or mechanical arrangements of active or potential leverage-augmentation.

Component number two, cosmic energy, cannot be lost.

Constituent number three not only improves with use but is interactively self-augmenting.

Summarizing, components #1 and #2 cannot be lost or diminished and #3 increases; net result **inherent gain.** Inherent gain is realized in physical advantage of **forward** potential (it cannot be articulated backwards; it is mathematically irreversible). Thus, industrial potential is schematically directional and not "randomly" omni-directional. Thus, the "life" activity as especially demonstrated by man represents an anti-entropic phase of the transformation of non-losable universal energy.

The all-positive principle of industry paradoxically is being assimilated by man only through emergent expedients—adopted—only in emergency because of his preponderant fixation in the direction of tradition. Backing up into his future, man romantically appraises the emergent dorsal sensations in the negatively parroted terms of his ancestors' misadventures.

Essence of the principle of industry is the principle of **synergy** (Miriam Webster: "Co-operative action of descrete agencies such that the total effect is greater than the sum of two or more effects taken independently"). The principle is manifested both in the inorganic and organic. The alloying of chrome and nickel and steel provides greater tensile strength than that possessed by any of its constituents or by the constituents in proportional addition. Three or more persons by specialized team work can do work far in excess of the work of three independently operating men. Surprisingly, and most contradictory to the concept of feudal ignorance, the industrial chain's strength is not predicated on its weakest link. So strong is the principle that it grows despite a myriad of superficially failing links! In fact there are no continuous "links" in industry or elsewhere in universe because the atomic components are—interiorly, spaciously discontinuous.

The strength of "industry" as with the strength of the "alloy" occurs through the cocentric enmeshment of the respective atoms. It is as if two non identical constellations of approximately the same number of stars each were inserted into the same space making approximately twice as many stars, but none touching due to the difference in patterns. The distances between stars would be approximately halved. It is the same with alloyed atoms whose combined energetic cohesion increases as the second power of the relative linear proximities of the component parts. Though the parts do not "touch" their mass cohesive dynamic attraction follows the gravitational law of proportionment to second power of the distance apart of centers. Therefore, alloying strength is not addative arithmetically but is advantaged by gravity which as Newton discovered is inversely proportional to the "square" of the distance apart.

Man has now completed the plumbing and has installed all the valves to turn on infinite cosmic wealth. Looking to the past he wails, "How can I afford to turn on the valve? If I turn it on, somebody's going to have to pay for it!" He forgets that the bill has been prepaid by all men through all time, especially by their faithfully productive investments of initiative. The plumbing could not have been realized except through **absolute prepayment** of intellectually organized physical work, invested in the inherent potentials of nature.

Not only is man continually doing more with less—which is a principle of trend which we will call "ephemeralization"—a corollary of the principle of "synergy"—but he is also demonstrating certain other visible trends of an epochal nature. Not only does he continually increase literacy but he continually affords more years of more advanced study to more people. As man becomes master of the machine and machines are introduced to carry on every kind of physical work with increased precision, ef-

fectiveness and velocity, his skilled crafts, formerly intermittently patronized, graduate from labor status to continuity of employment as research and development technicians. As man is progressively disemployed as a quantity production muscle-and-reflex machine, he becomes progressively reemployed in the rapidly increasing army of research and development—or of production-inaugurating engineering—or of educational and recreational extension, as plowed back increment of industrialization.

Product and service production of any one item of industry trends to manipulation by one man for the many through push-button and dial systems. While man trends to increasing **specialized function** in anticipatory and positive occupations of production, he also trends to **comprehensive** function as consumer. Because the principle of industry improves as the number of people it serves is increased, it also improves in terms of the increase of the number of functions of the individual to which it is applied and it also improves in terms of its accelerated use.

Throughout the whole history of industrialization to date man has taken with alacrity to the preoccupation of the specialist on the production side of ledger but the amplification of the functions of the individual as comprehensive consumer have been wretched and jerked and suffered into tentative and awkward adoption in the mumbo-jumbo and failure-complex of obsolete feudal economics. Up to yesterday man was unaware of his legacy of infinite cosmic wealth. Somewhere along the line society was convinced that wealth was emanating from especially ordained mortals to whom it should be returned periodically for mystical amolification. Also with feudal fixation man has looked to the leaders of the commercial or political states for their socio-economic readjustments—to the increasingly frequent "emergencies."

Throughout these centuries of predominant ignorance and vanity the inherently comprehensive-thinking artist has been so competent as to realize that his comprehensive thoughts would only alienate him from the economic patronage of those who successfully exploited each backing up into the future. The exploiters, successively successful, have ever attempted and in vain to anchor or freeze the dynamic expansion at the particular phase of wealth generation which they had come to monopolize.

The fool-hardy inventors and the forthright prospectors in humble tappings of greater potentials have been accounted the notable failures. Every industrial success of man has been built on a foundation of vindictive denouncement of the founders.

Thus the comprehending artist has learned to sublimate his comprehensive proclivities and his heretic forward-looking—toward engagement of the obviously ripening potentials on behalf of the commonwealth. The most successful among the artists are those who have effected their comprehensive ends by indirection and progressive disassociations. So skillful have the artists of the last centuries been that even their aspiring apprentices have been constrained to celebrate only the non-utilitarian aspects of the obvious vehicles adroitly employed by the effective artists to convey their not so obvious but all important burden.

Thus the legend and tradition of a "pure" art or a "pure" science as accredited preoccupation have grown to "generally accepted" proportion. The seemingly irrelevant doings of the pure scientist of recent decades exploded in the face of the tradition of pure mathematical abstraction at Alamagordo. No one could have been more surprised than the rank and file of professional "pure" scientists. The results were implicit in the undertakings of artist-scientists whose names are in the dim forefront or are anonymous in the limbo of real beginnings. How great and exultant their secret conceptioning must have been!

Now the time has arrived for the artist to come out from behind his protective coloring of adopted abstractions and indirections. World society, frustrated in its reliance upon the leaders of might, is ready to be about-faced to step wide-eyed into the obvious advantages of its trending. Ergo—the emergence of comprehensive training for specialists in the husbandry of specialists and the harvesting of the infinite commonwealth.

Will the comprehensive designer, forthrightly emergent, be as forthrightly accepted by the authorities of industrialization and state? If they are accepted, what are the first-things-first to which they must attend?

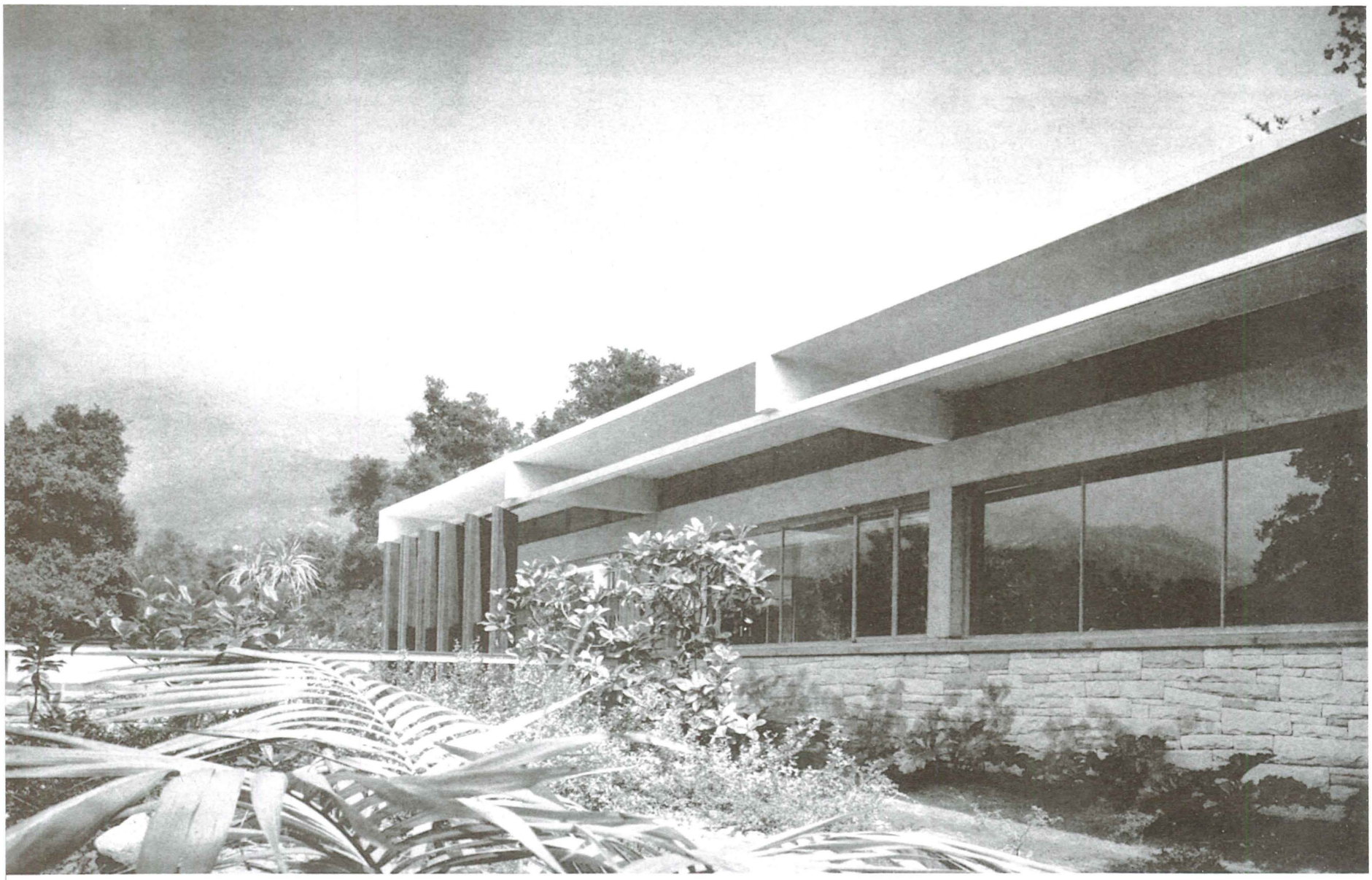
The answer to the first question is YES. They will be accepted by the industrial authority because the latter has recently shifted from major preoccupation with exploiting original resource to preoccupation with keeping the "wheels" which they manage turning—now that the original inventory of "wheels," i.e. tools in general has been realized from out original resource. Though original resource-exploiters still have great power, that power will diminish* as the mines now existing above grade, in highly concentrated "use" forms (yet in rapidly obsoleting original design), become the preponderant source of the annual need. Severe acceleration in the trend to **increase of performance per pound of invested material** now characterizes all world-industry. With no important increase in the rate of annual receipt from original mines, the full array of mechanics and structure requisite to amplifying the industrial complex, from its present service to approximately one-third the world's population, may be accomplished by the scrap "mined" from the progressively obsoleting structures and mechanics. World-industrial management will be progressively dependent upon the comprehensive designer to accelerate the turning of his wheels by **design acceleration.** Each time the wheels go round the infinite energy wealth of cosmos is impounded within the ever greater receptive capacities of the 92 element inventory of earth and those who manage the wheels can make original entry on their books of the new and expanding wealth increments even as the farmer gains cosmic energy wealth in his seasoned cycles.

*See New York Times, June 17, 1949, Page 2

R. Buckminster Fuller

JUNE 1, 1949

This text will be included in a forthcoming book to be published by Reinhold Publishing Corporation.



SANTA BARBARA HOUSE

by Richard Neutra, architect

Siegfried Giedion: Only one case may imply how far the development within a quarter of a century has led Neutra. Not without hesitation we single out one: Many of his houses are situated in far more spectacular landscapes than the Tremaine house, which is hard to find, as it is almost hidden in the wooded gentle slopes above Santa Barbara. But nowhere so much as here does the house seem to merge into the landscape more naturally and easily, yet differentiating themselves from it at the same time. Between the naturally growing and the artifically created by human hand, between nature and artefact, a living dialectic relation develops, which only a masterhand could have contrived.

The house is completely open, and yet, where the demand arises it maintains a certain reserve. Its core are the social quarters, flowing into one another without distinct separations. Typically, the social quarters and their elongation over the western terrace form a bridge into the landscape. (Even in his student projects Neutra had developed similar relations between inner and outer space.) The only rooms that hold themselves apart are bedroom, kitchen, servants-quarters and the guest-room.

The social quarters with their glass walls are broadly opened into the landscape, but the entrance drive is stopped by massive walls. But just here the interpenetration of the structural framework with architectural expression has caused something wonderful to happen. The heavy walls of the guest wing forbid admittance, but at the same time, the structural skeleton protruding from the interior of the house and forming a cantilevered roof, protects the porch and invites entrance. The porch has become no longer an annex, but inseparable from the main body of the building.

What has happened?

On pillars of reinforced concrete, which are regularly spaced throughout the house a network of superposed beams and crossbeams rests. Through the slender slab-like beams and the thin slabs of the roof, an unaccustomed structural lightness is produced. For the Health Center in Puerto Rico, in 1944, Neutra had already proposed the same shading and rainprotecting overhangs for continuous subsoffit airchange over lowered spandrels. Cross ventilation and diffusion of light right under the ceiling is also the reason for this airy construction. The slim beams set on edge, together with their thin roof-slabs give the Tremaine house a hovering quality, and yet, by their anchorage in the depths of the structure, an air of tranquility is achieved. Neutra states (page 120) how early (1923) the differentiation of structural elements emerges in his work. Only in the Tremaine residence the transcendence of mere function into psychic expression is accomplished.

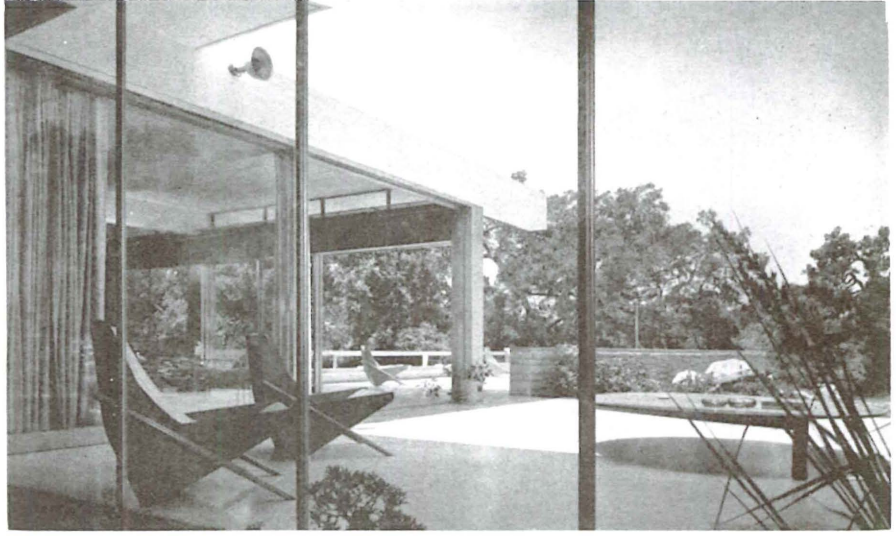
A Close-up into Landscape: F. L. Wright grew out of prairie earth. He can almost transform himself into a piece of material; a stone, wood, or a plant.

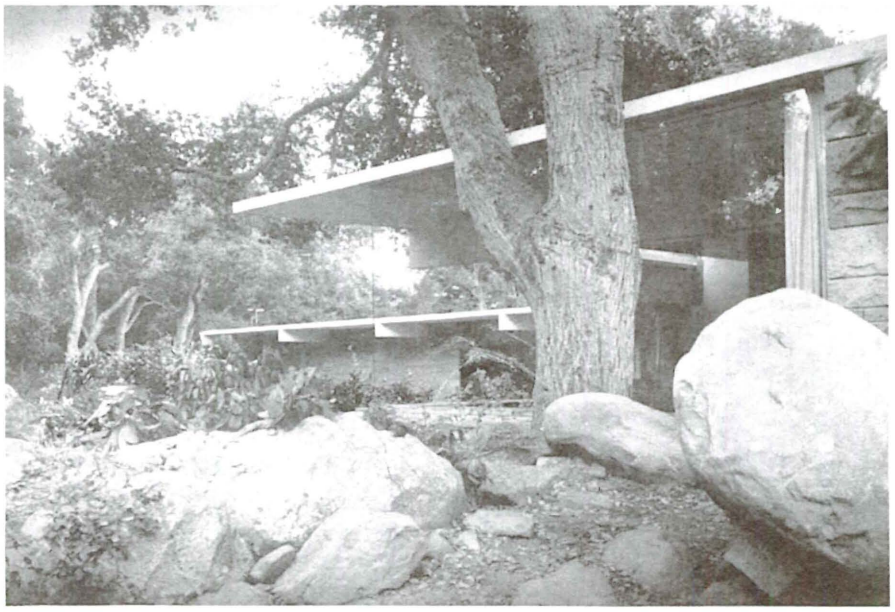
R. J. Neutra is a city-dweller. He approaches nature, man and materials with the analytical eye of an explorer. Through his love for these and a sensitivity which is ever alive to them, he is near them in a particular way. This is not so much a reference to the use of dramatic contrasts that can be seen in some of Neutra's houses: Panoramic view of the ocean on the one side, view of a swimming pool, garden enclosed, on the other.

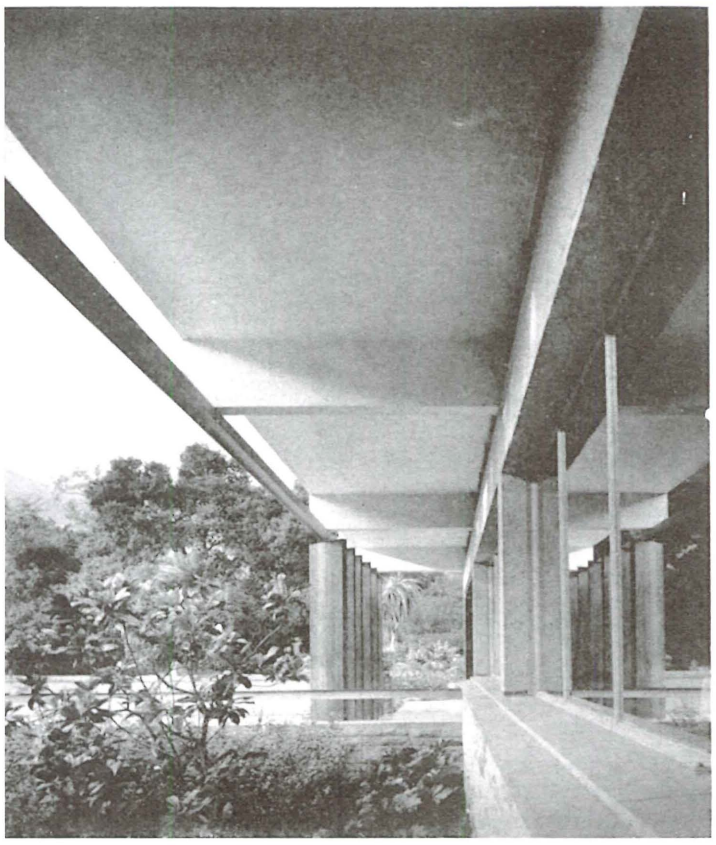
Here too, we think of a single case; the contact between the master-bedroom and nature, in the Tremaine residence. The waking man is not interested in wide panoramas and dazzling light. He prefers to see things close at hand and only gently illuminated. The master-bedroom faces the mountains, and the eye wanders along gentle slopes, losing itself in the intimate nearness of green plants and rough stones, and the structure of furrowed, evergreen oak-trunks.

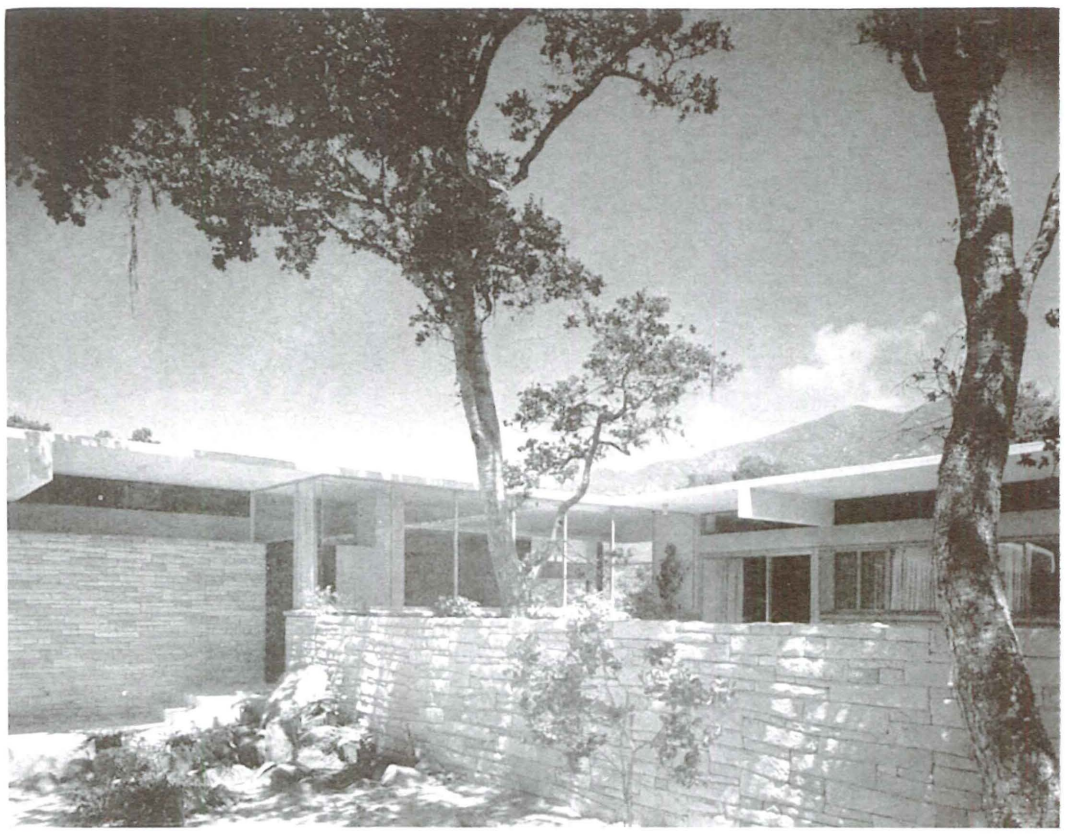
What has been done by the architect? Almost nothing. He simply left the site undisturbed, so that the ground nearly reaches the window sill. And yet, a view into a microcosm of nature has been created—unknown to me anywhere else. This power to leave nature undisturbed and simultaneously to draw her into a specific emotional situation, reveals the artist, no less than the power to transfuse a ferro-concrete skeleton with psychic value.

Introduction by Siegfried Giedion to Architect Boesiger's Book "RICHARD NEUTRA," Publisher Girsberger, Zurich, Switzerland

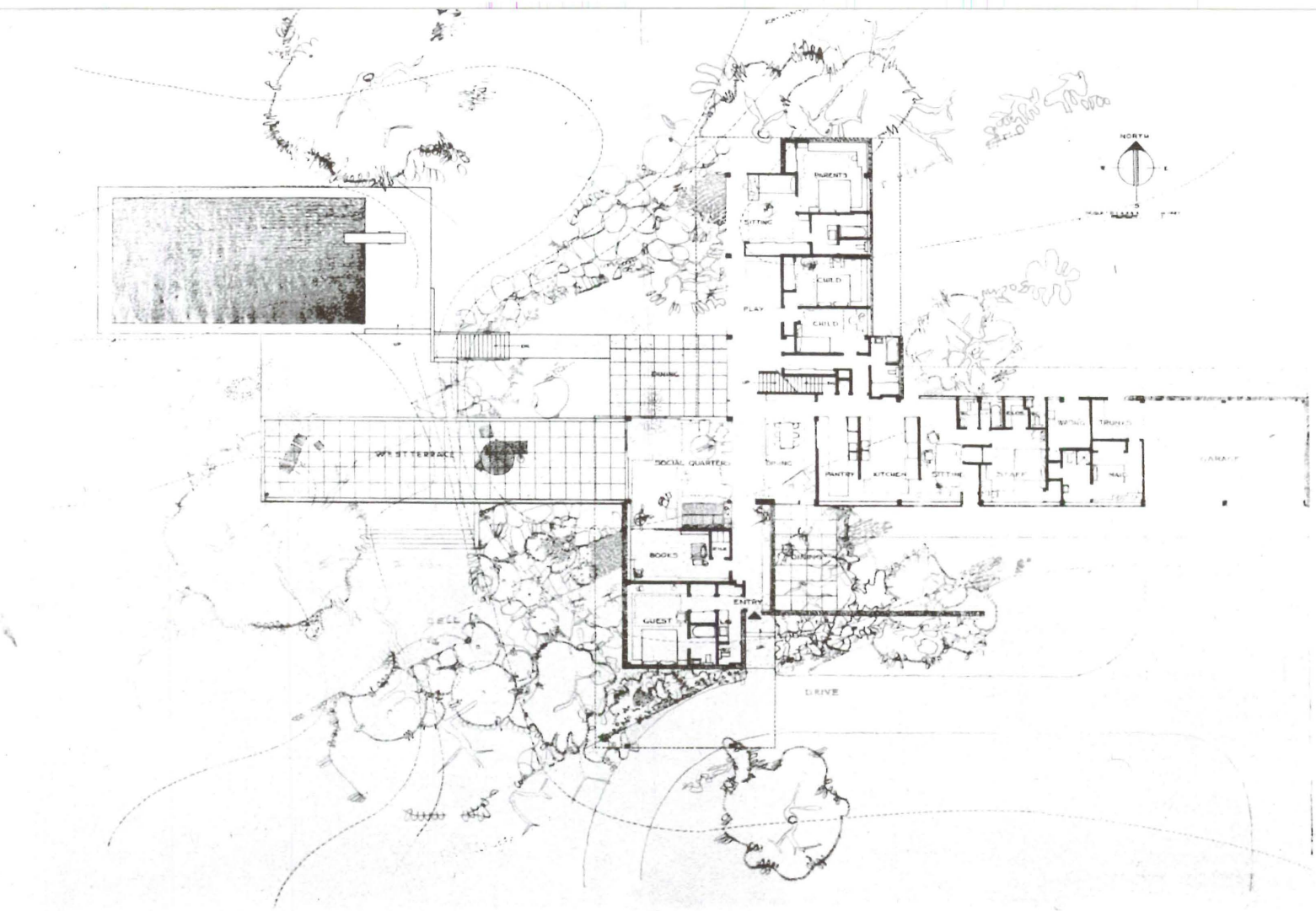




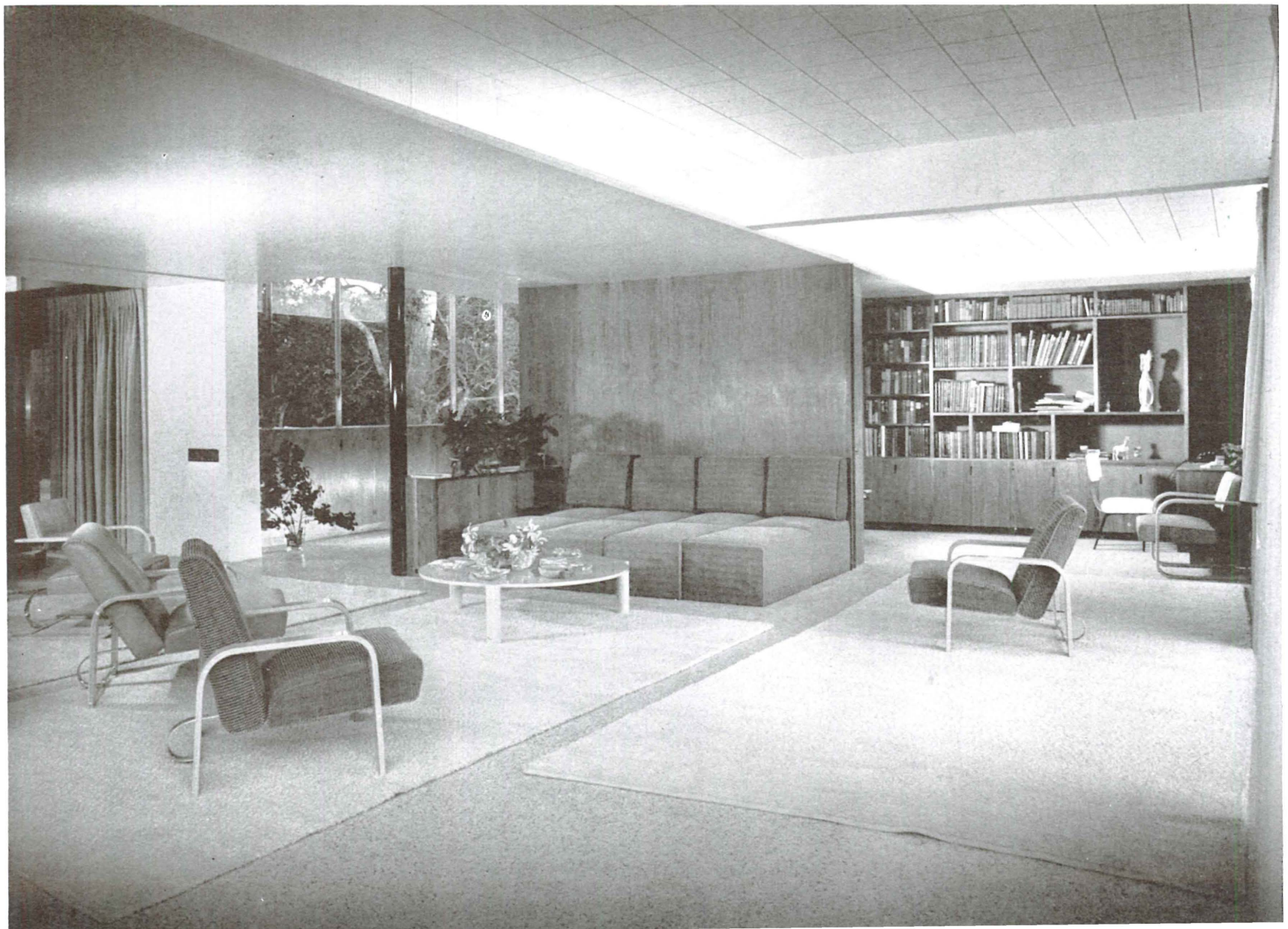


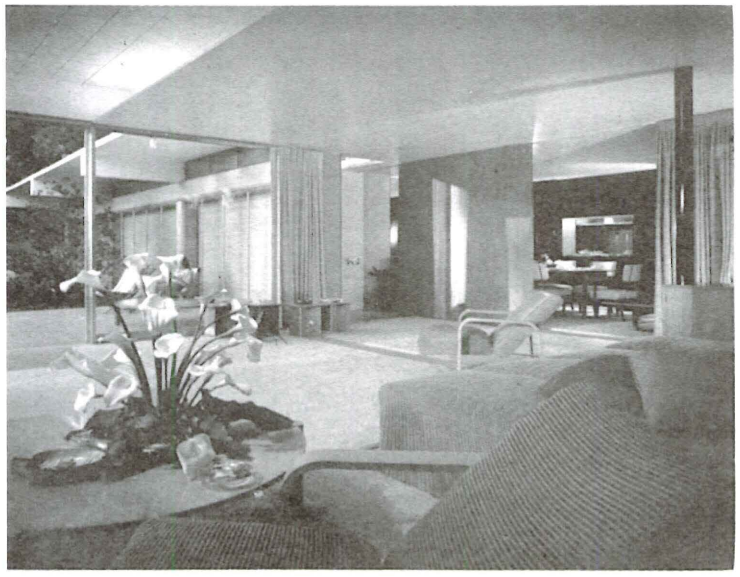


PHOTOGRAPHS BY JULIUS SHULMAN

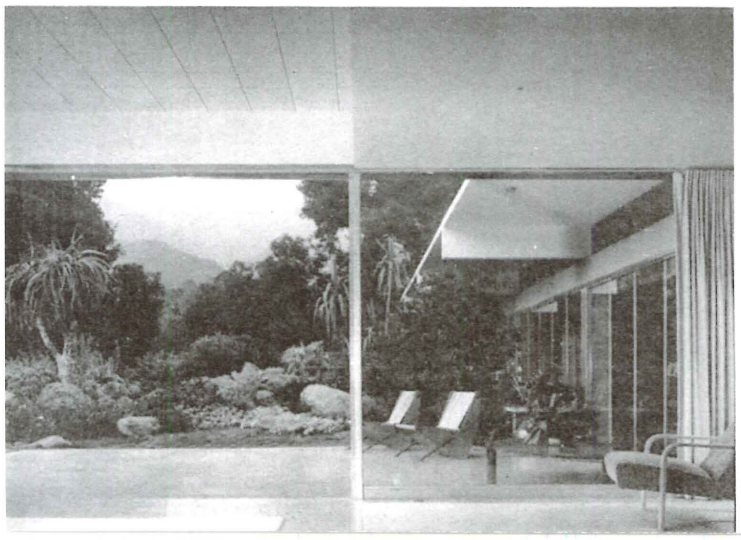


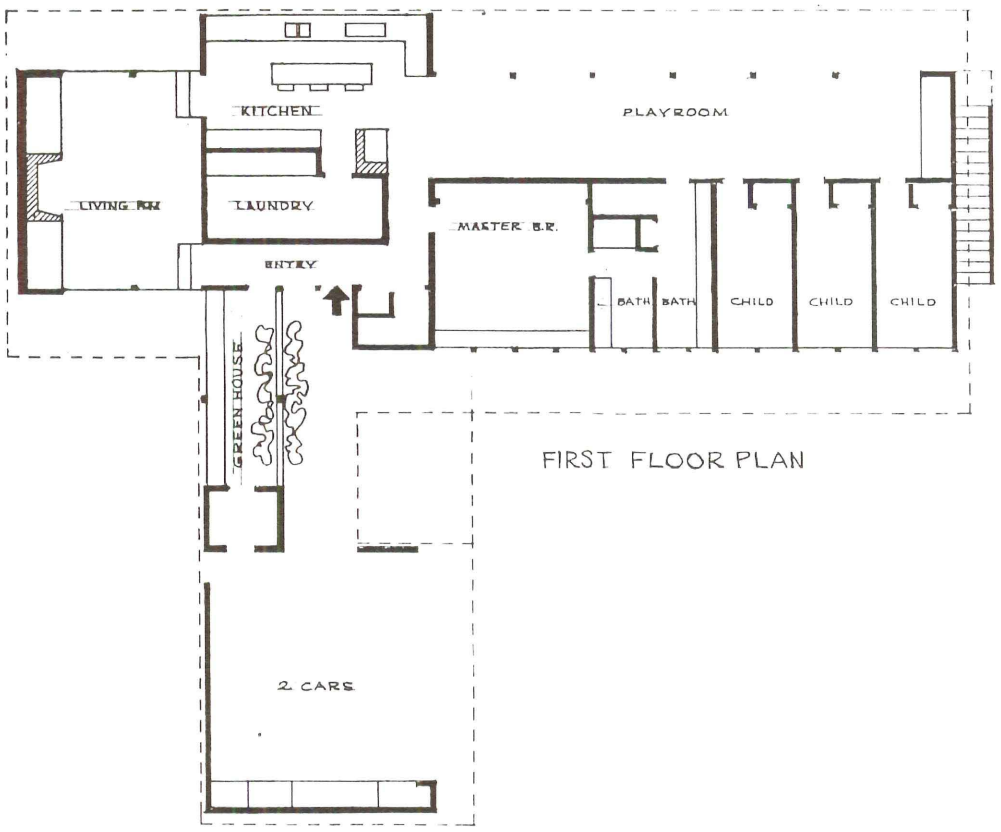
SANTA BARBARA HOUSE BY RICHARD NEUTRA



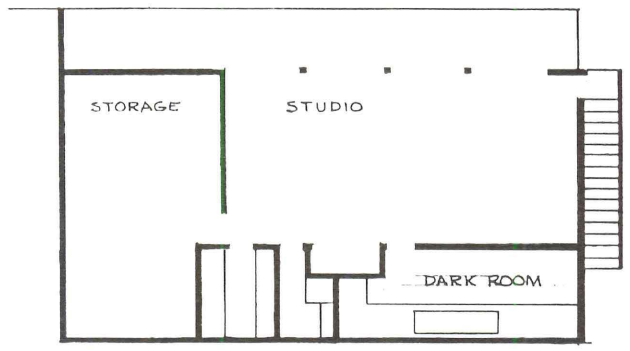


Opposite page, below: Living room furniture was designed by the architect—couch formed of sectional ottomans can be taken apart to seat informally a number of guests. This page, left from top to bottom: The dining table may be lowered to coffee table height—partitions disappear, portholes to pantry close, and the dining area becomes a part of the living quarters. These quarters open to a radiantly heated dining terrace with a mountain vista in the background. The elastic changeability of interiors increases the usefulness of the floor area. Looking from outdoor dining terrace to the mountain vista. Right, above: Detail view over living room couch in front of walnut paneling with dining space to left. View from staff dining room into kitchen and pantry bays.



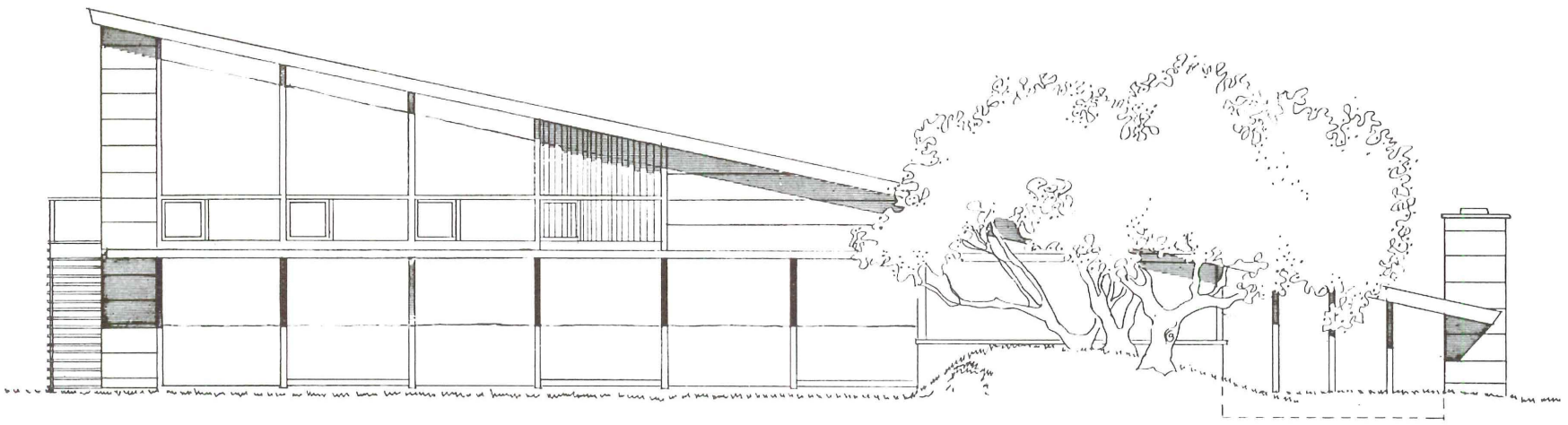


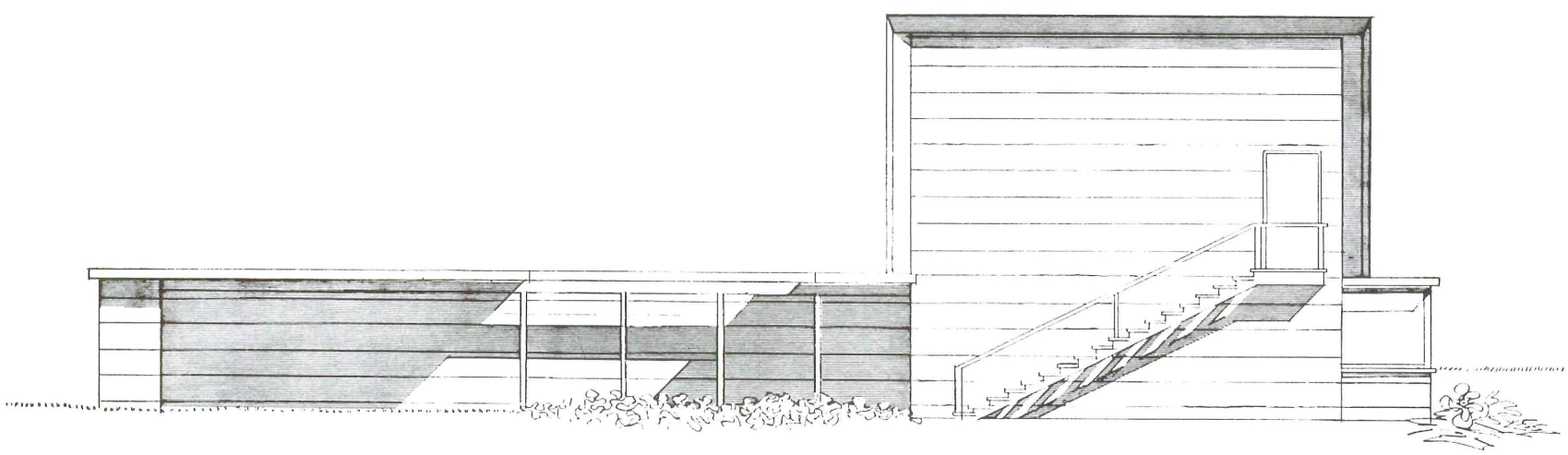
FIRST FLOOR PLAN



ATTIC STUDIO

A COUNTRY HOUSE

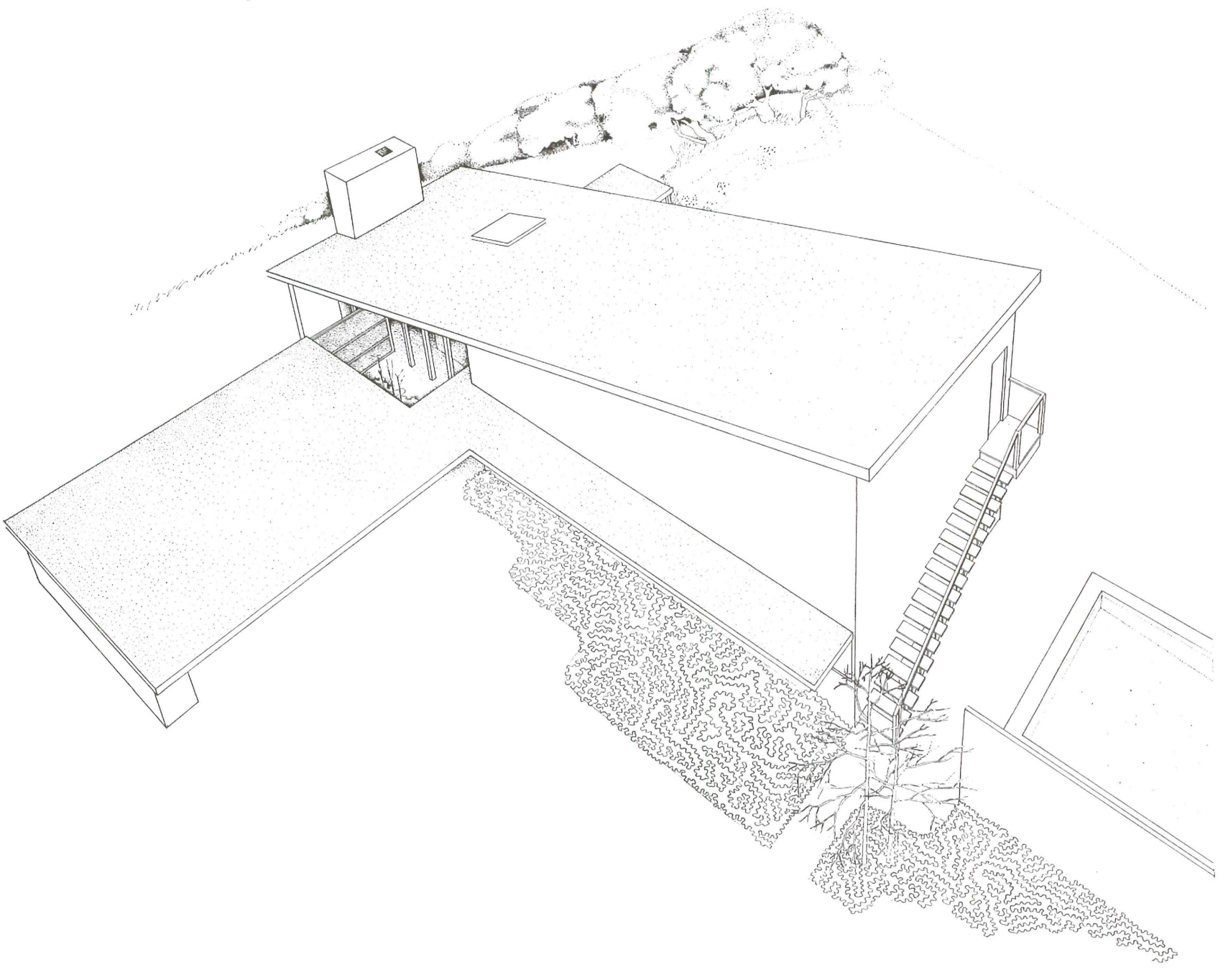


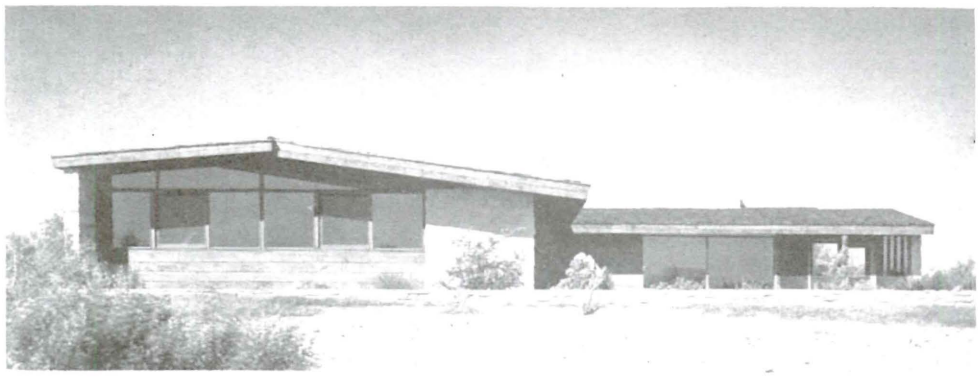


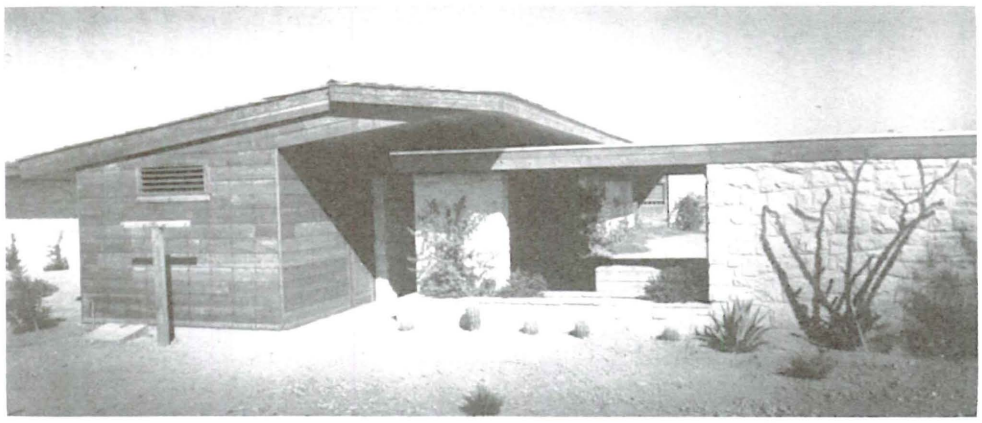
This house was designed to accommodate a family consisting of parents and three children.
To the left of the entrance is a greenhouse. Inside the hall to the left and down two steps is the small living room which can be closed with sliding door. To the right the hall leads around island room entirely enclosed which houses laundry room and opens into master-bedroom, kitchen, (another entrance to living room from kitchen) and play-gallery-dining room, bedrooms for children and bath. Stair at end of house leads to studio and darkroom and bath.
The small living room which can be entirely closed off is for the use of the parents in private entertaining or quiet talking time without the children. This means that the family life can go on, uninterrupted by formality.
The kitchen looks out on an eye-level island of earth upon which there is a full-grown live oak spreading along the window lines and providing a playground for the children.
The house is redwood inside and out. Black hardware. Lighting fixtures copper. Floors cement with radiant heating. Roof silver capsheet.

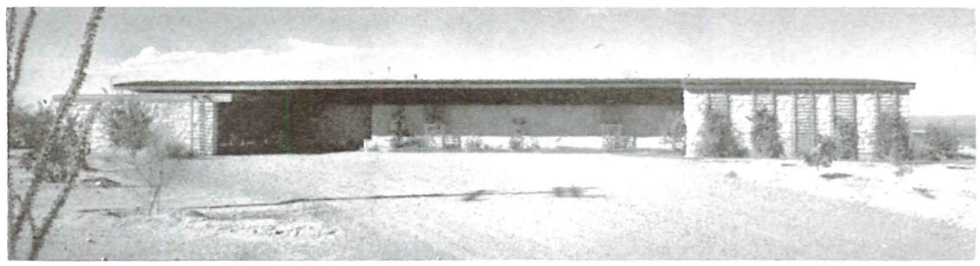
Landscape: Thomas Church

Mario Corbett, Architect



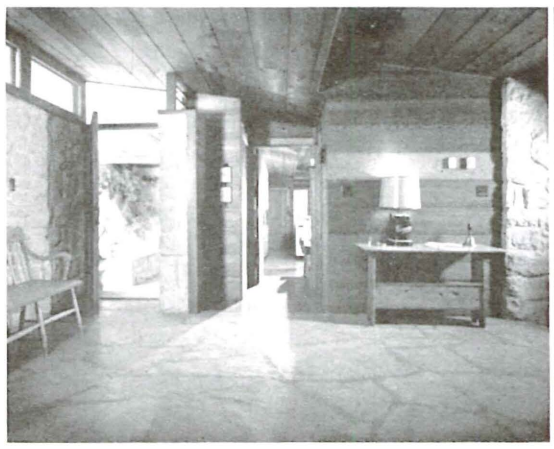


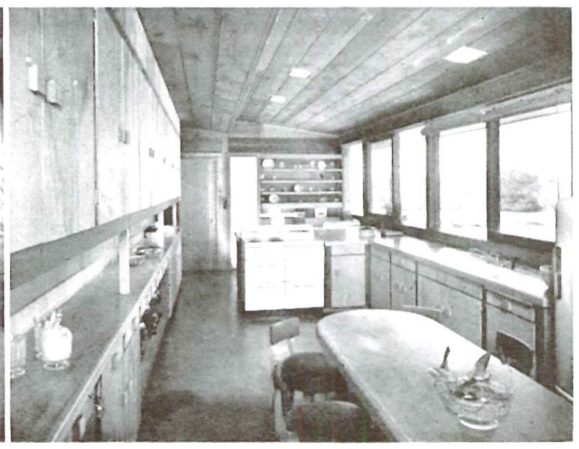


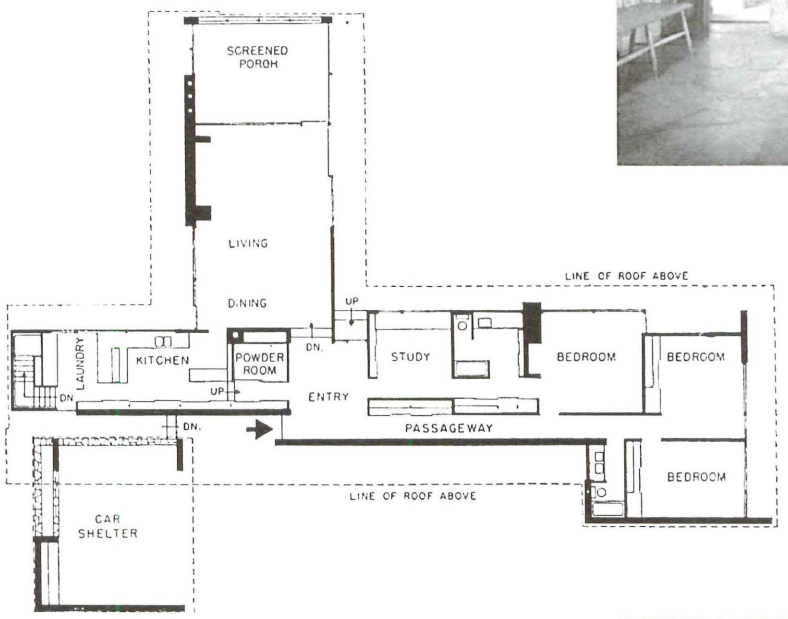


A HOUSE IN THE DESERT

Below: Detail of the living-room fireplace; the off-center roof construction provides duct spaces; light coves, with fluorescent lamps, provide general night-time illumination and help integrate structure and finished design.







Above: Detail of entrance area, with front door in masonry wall at left, and passage through to kitchen, center. Details of the kitchen with concrete floor, redwood and plywood wall and ceiling surfaces.

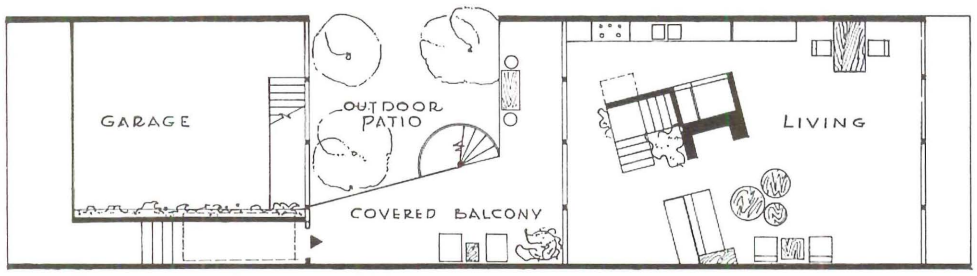
Below: Looking toward entrance area from the living room showing the high window strip at the top of the southern masonry wall.

PHOTOGRAPHS BY JULIUS SHULMAN

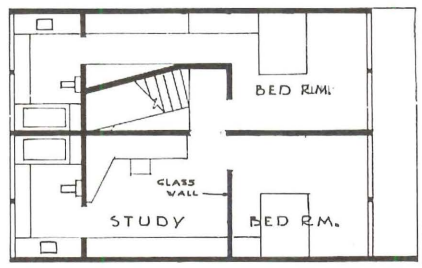
Schweikher & Elting, architects

The house was planned and built for a family of four on a 20-acre site at the edge of a desert which ranges from northeast to southeast. Hills lie to the west, north, and south. The house has been oriented to turn away from the hot mid-day sun and is open to views of the desert and the hills toward the east and north. High windows deeply recessed under the roof overhang provide the very necessary cross ventilation.

On a concrete slab, the walls are either wood frame surfaced with shiplap redwood or volcanic stone masonry. The interior surfaces are of stone, redwood and plywood; the floors, concrete and stone flagging.



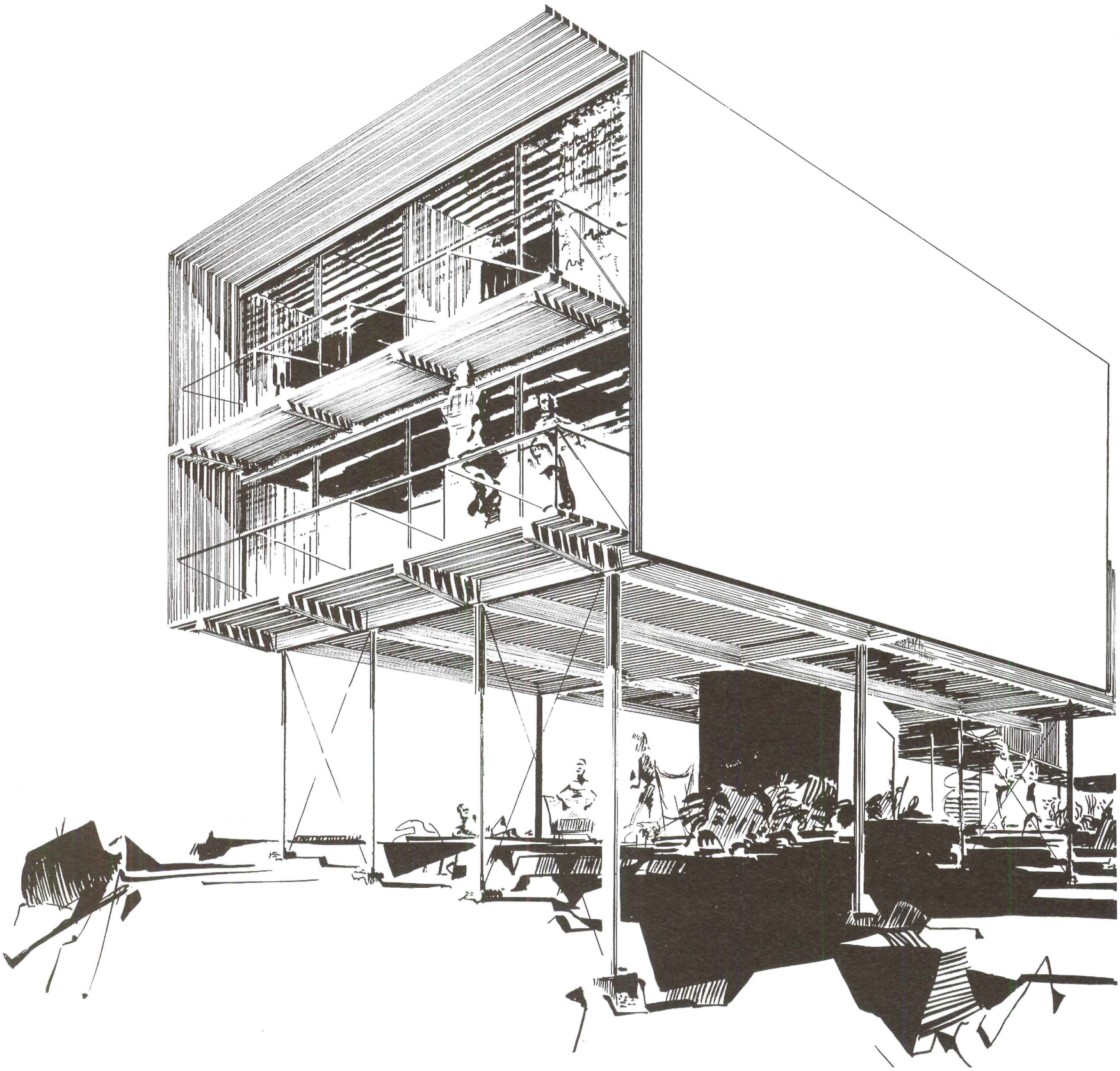
GROUND FLOOR

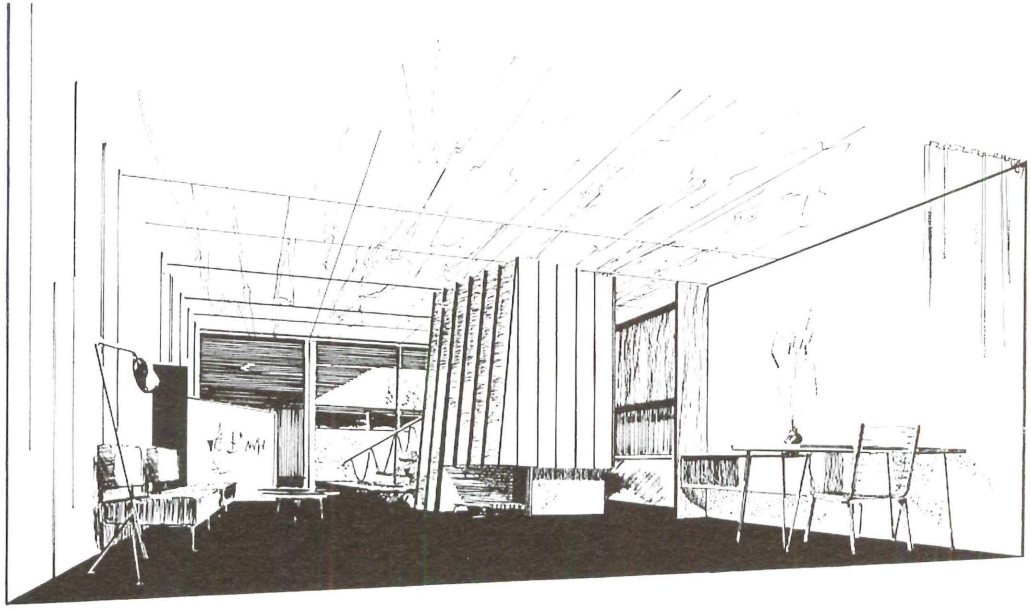


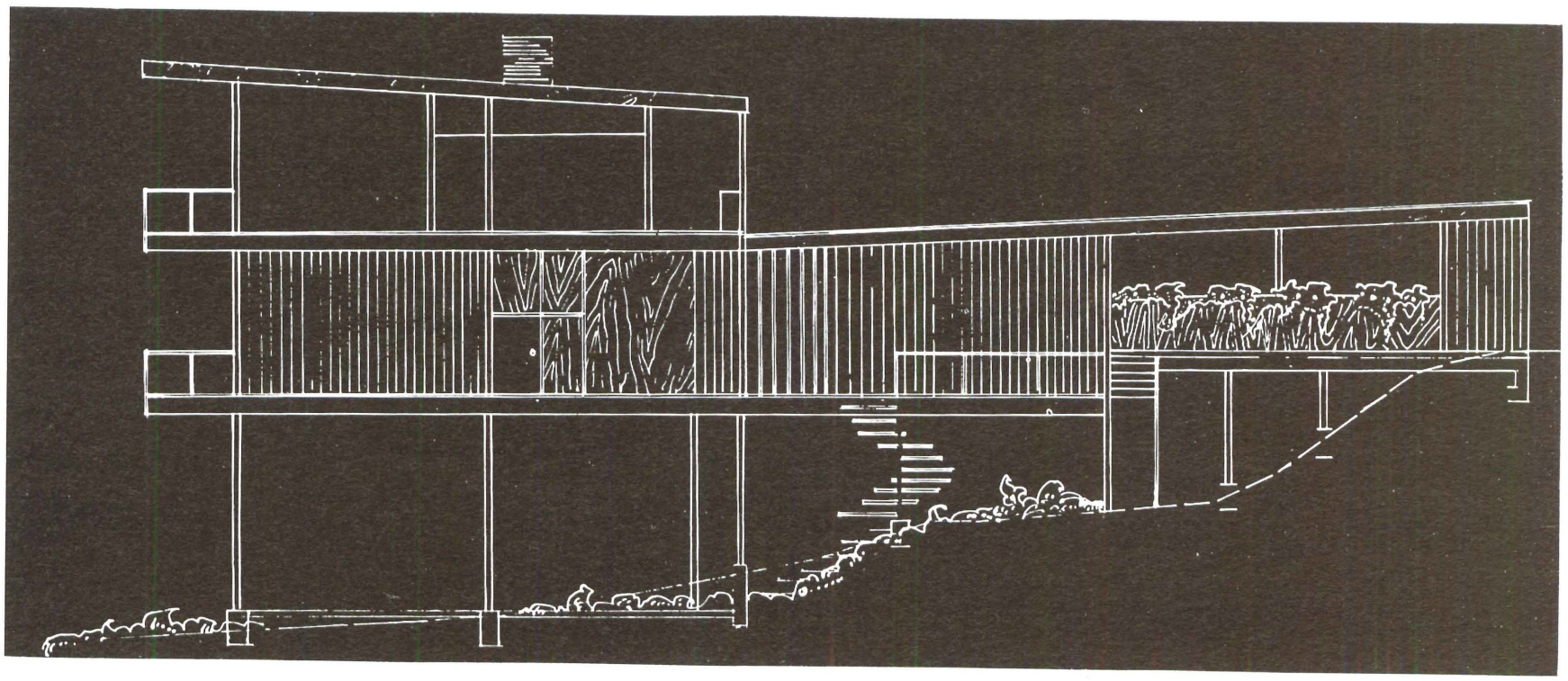
SECOND FLOOR

Greta Grossman, designer

San Francisco House







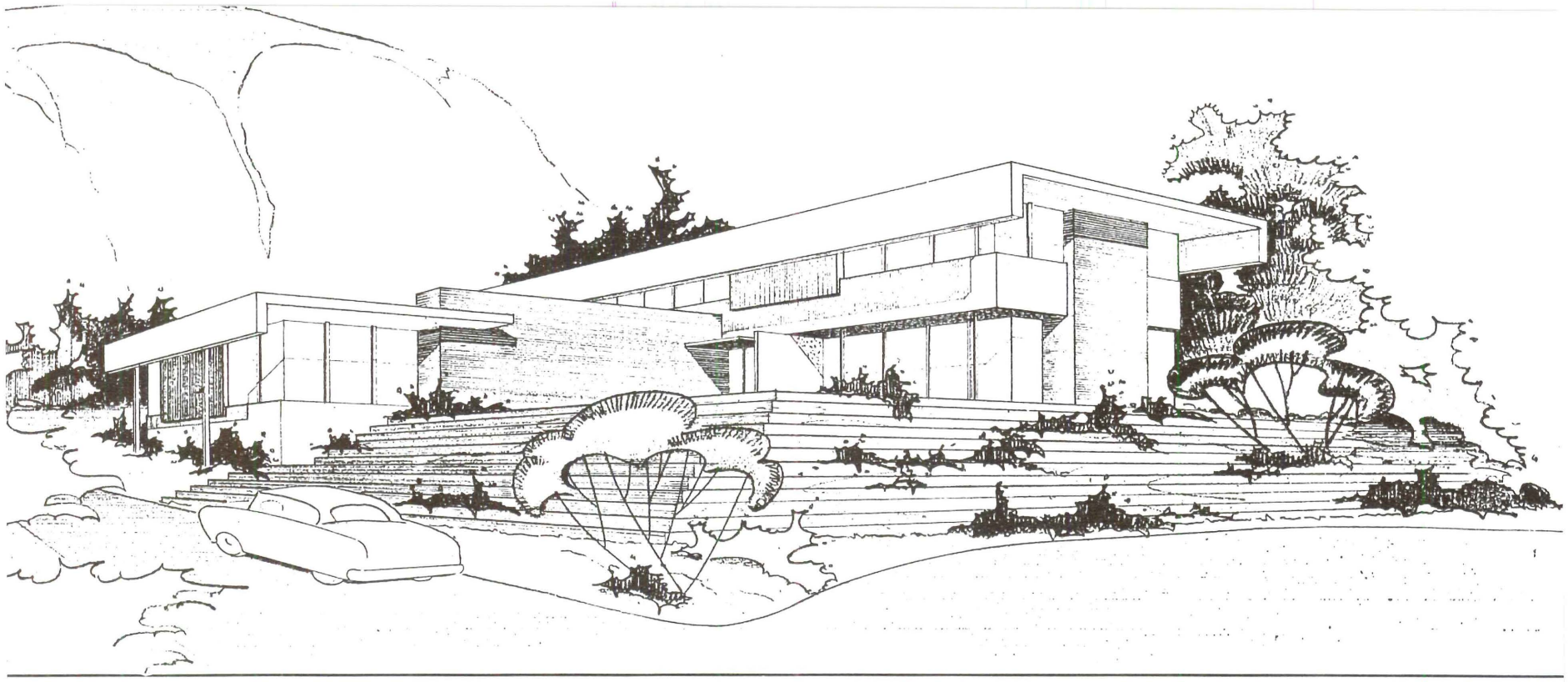
The lot is 24′ x 125′ with a maximum slope of approximately 22′. At about 100′ from the street and at street level one has a magnificent view.

The client did not want a too large house but wanted to be able to enjoy that view. The front of the house consisted only of the garage door and a skylighted "alley" running sideways with the garage to the entry door. This opens up to a covered patio, at which end the house begins. From this patio a spiral staircase leads down to the garden.

The space under the house is utilized for service utilities and outdoor living area. The indoor living activities center around the fireplace as do the stairs leading up to the sleeping quarters.

The space beside and under the stairs is utilized as a planting area. On the kitchen side the refrigerator and closets are built in under the stairs.

One of the bedrooms is divided into two parts, one portion being used as a study. All closets are door height and all cabinets are elevated from the floor.



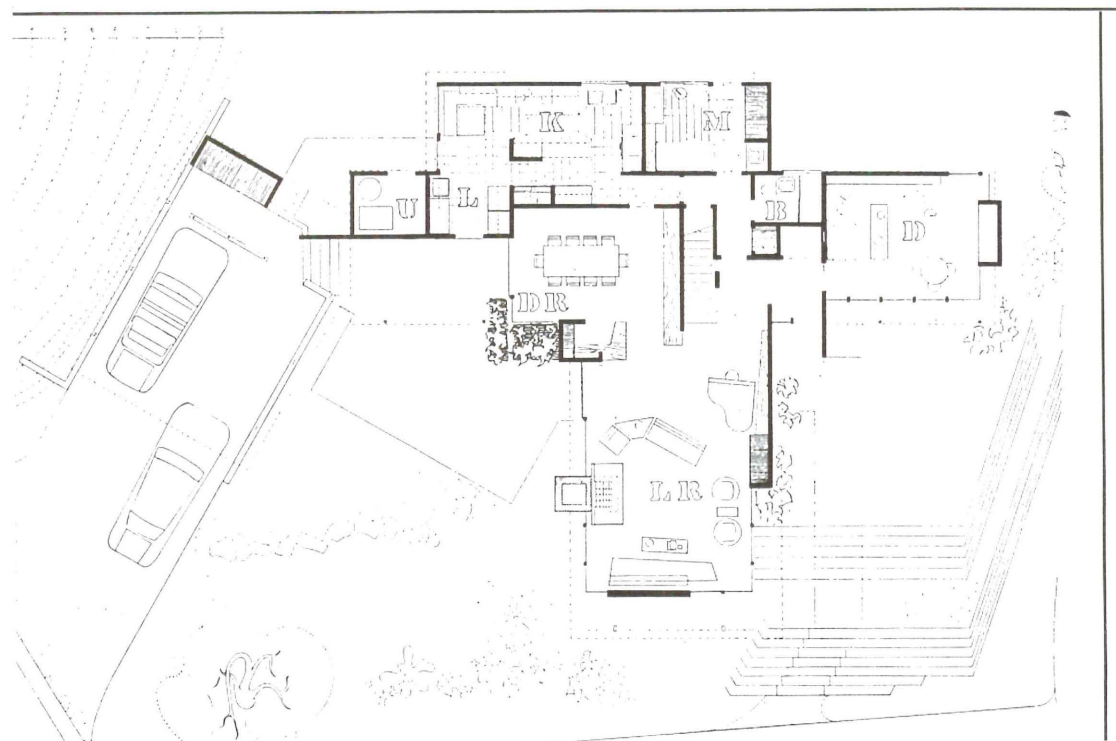
PROJECT FOR A VIEW HOUSE

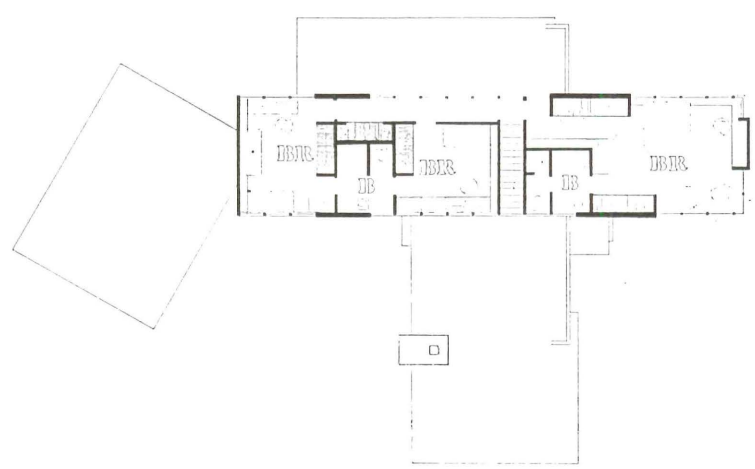
Architect: A. Quincy Jones, Jr.

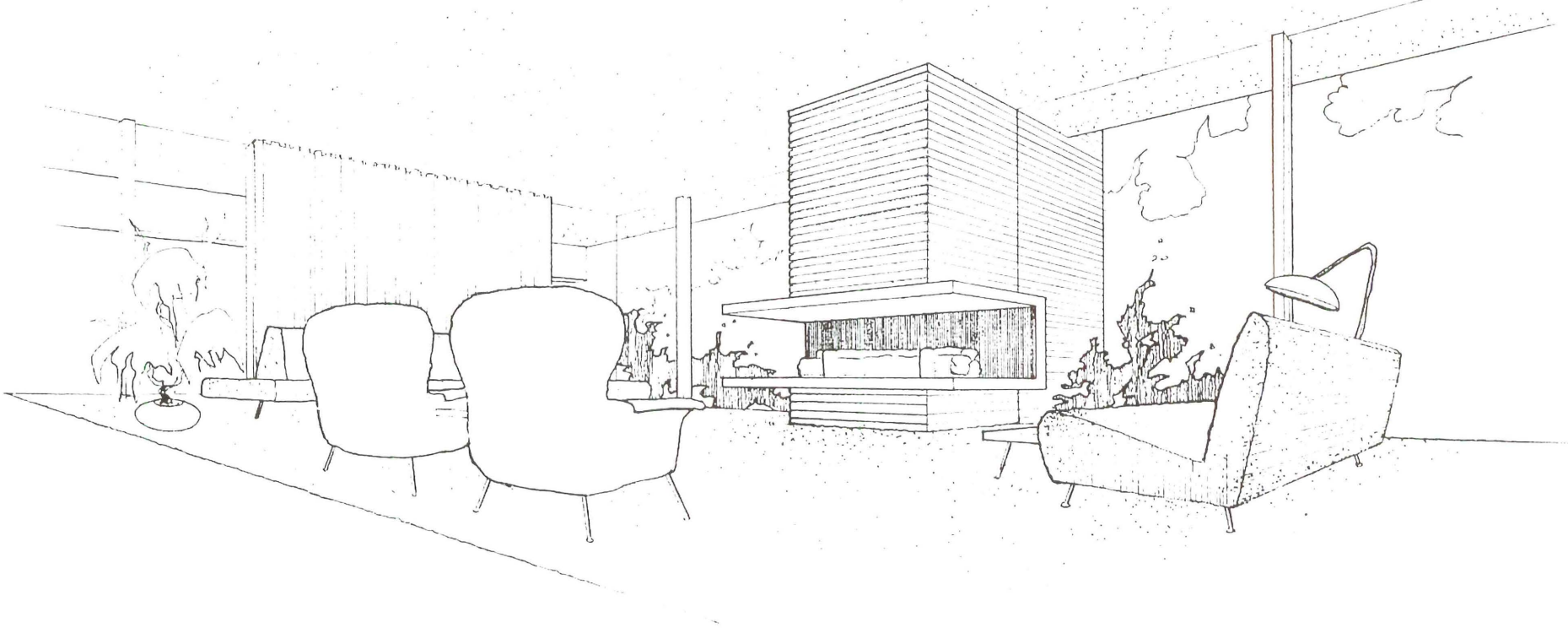
Site: 80′ x 160′ lot with a pre-architect graded building site approximately 10′ above the street which runs along the south property line. A paved driveway running along the west and northwest property lines, and along the west line, it rises to meet the building site at the northwest corner. This driveway dictated the carport location.

Problem: To design the house around a family of husband, wife, son and daughter. Protected outdoor living area with privacy from street, and full advantage of the views, and these requirements to be considered within a stipulated budget.

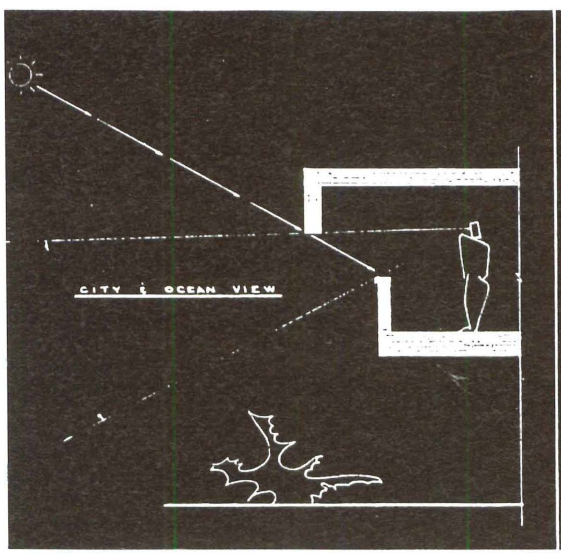
Solution: There was no attempt at a "new" structural system. The method of construction is the conventional stud system with thought given to a modular framing scheme so that rafters, joists, etc., could be cut to consistent and economical lengths. The turned-down roof eaves are to the east and west, in an attempt to control sun and light. The hope was to add not more than the cost of the "usual" but poor solution of venetian blinds. This roof scheme makes it a little easier to kill the mirror effect of glass, since the eave surface is illuminated.



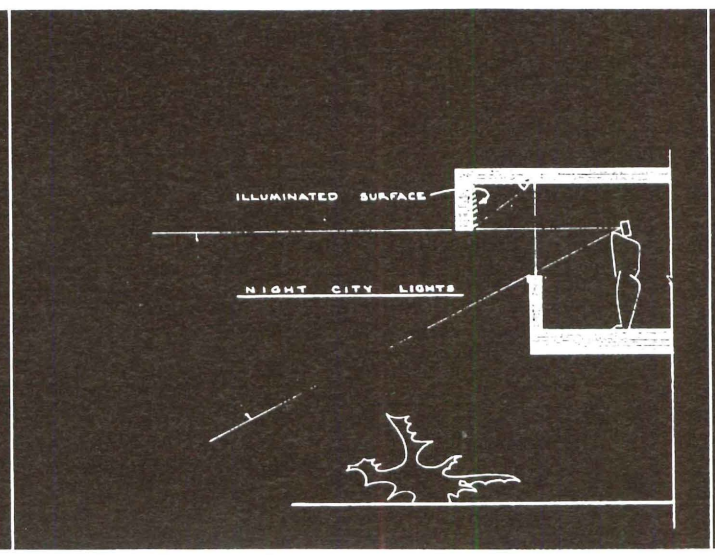




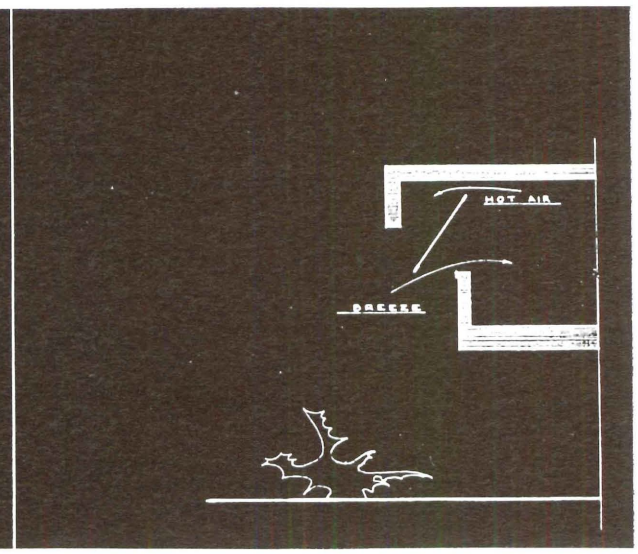
The living room fireplace is designed with open sides to permit a complete semi-circular seating arrangement. The bar forms the definition between dining and living areas and by using a screen the more formal dining can be set up ahead of entertainment time.



SUN CONTROL



REFLECTION CONTROL

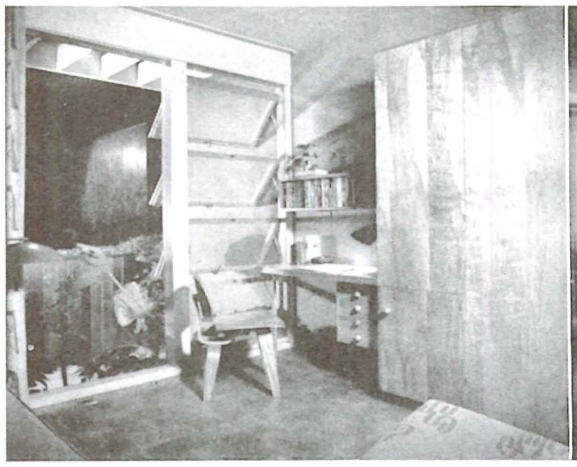


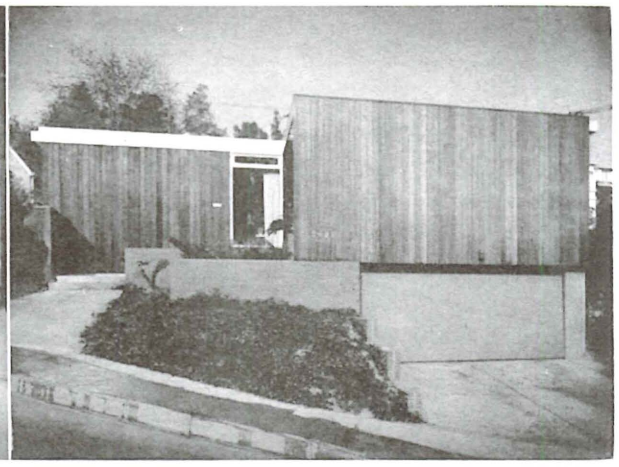
AIR CONTROL

The outdoor living area is located in the northwest corner of the property which permits of absolute privacy from the street. The house forms the screen. The planted area allows for a later swimming pool. The second floor extends beyond the glass wall of the dining room forming a porch to provide both a shaded area and protection of garden furniture in bad weather.

SMALL CITY HOUSE

Eugene Choy, architect



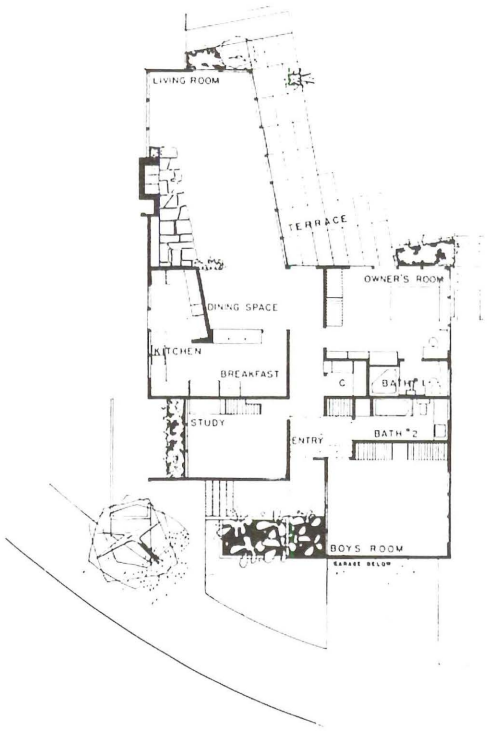


A hillside lot which sloped in two directions was the site planning problem encountered. This lot has fifty foot width with a frontage that curved at a 30° angle. Small children in the family negated changes in floor level and a shaded private garden-terrace was desired. To accomplish a one-level plan a shelf was cut out of the hill for the house. This made possible a level garden-terrace area in the rear with the remainder of the lot rising sharply to give privacy from the back. The garage is placed on a lower level in accordance with the sloping street.

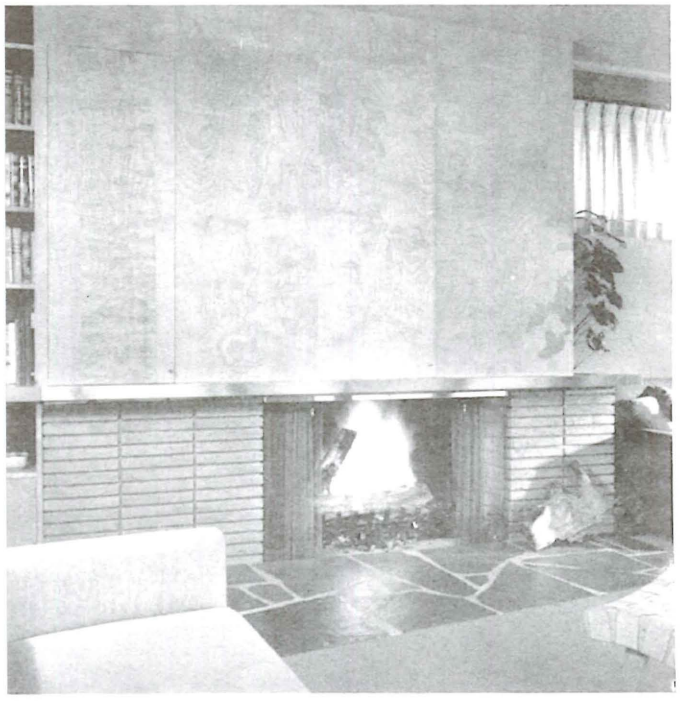
The house was planned for a family of four. Privacy for diversified activities was a factor to be considered.

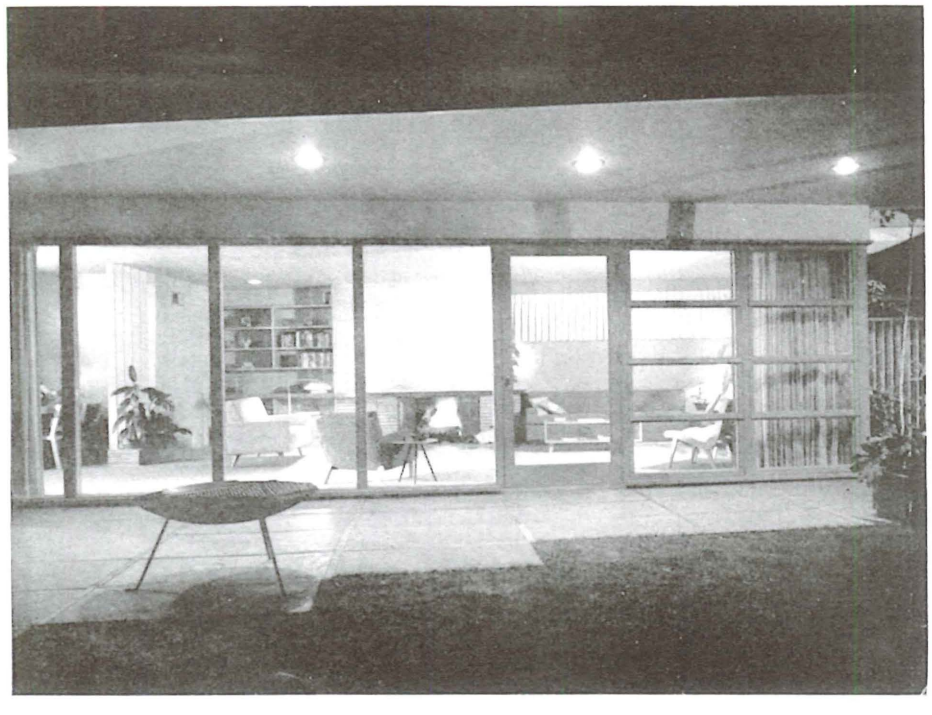
The living-dining area faces the garden-terrace and is not directly visible from the entry and it is free from cross-traffic.

The master bedroom faces the garden-terrace and has easy accessibility to all parts of the house. "Built-ins" are the feature of this room: bed and shelf-cabinet headboard dressing-table and mirror, dresser-drawers and mirror, wardrobes and storage shelves. The boys' bedroom is placed away from the active-living areas for privacy and quiet. The study-guest room is also isolated by location and further so by sound-absorbing materials: acoustic-tile ceiling, cork floor, and fibre glass insulation in the common walls. The exterior vertical redwood siding is repeated in the rooms fronting on the street. Hardwood veneer is used in the living-dining area and over the mantel. The redwood and hardwood walls have a natural finish.



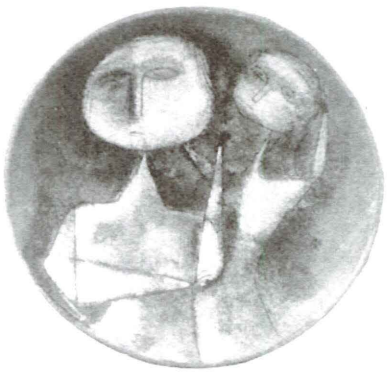
PHOTOGRAPHS BY JULIUS SHULMAN





CLAY PAINTING

by Polia Pillin

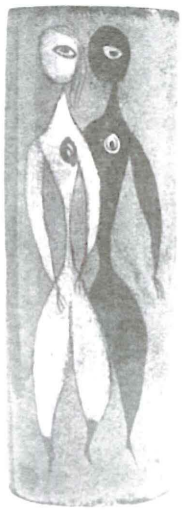


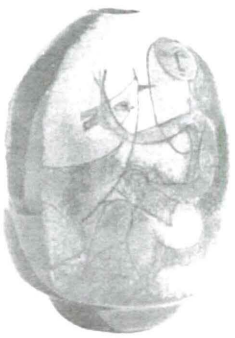
Slip, sometimes known as "engobe" is clay mixed with water to a creamy consistency. To color it, small quantities of metal oxides are added. The function of "slip" in the past was to relieve the surface of a pot with a few strokes of color, or to dip the whole pot to improve its color. For more elaborate decoration, underglazes were used. By varying quantities of oxides in "slip" and by combining various colors, an almost infinite palette may be obtained.

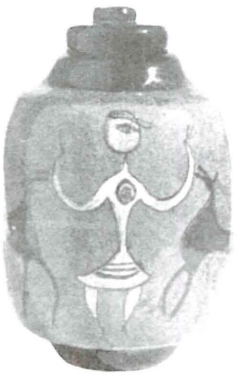
The technical resources are endless. It can be worked transparently or opaquely; by using a very thin brush, an exceedingly thin line can be achieved; sponging and blotting accomplishes a wide variety of textural effects.

The colors are permanent. Water, fire, acid will not injure a clay painting which after firing at 2000 degrees Farenheit becomes a stone tablet harder than most varieties of rock.

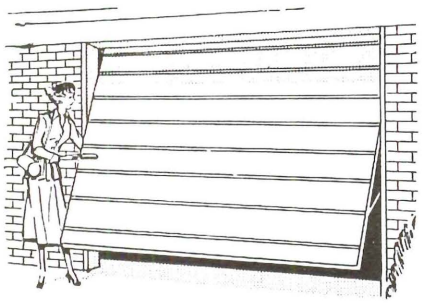
The effective use of "slip" is difficult. Colors change somewhat after glazing, and it is necessary to anticipate the change in order to get the desired result. The clay must be worked while the slab is damp. But once having mastered the difficulties, the artist has open before him new areas of plastic exploration.







Announcing !



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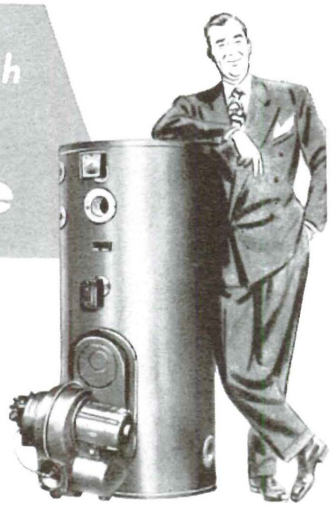

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CURRENTLY AVAILABLE PRODUCT LITERATURE AND INFORMATION

Editor's Note: This is a classified review of currently available manufacturers' literature and product information. To obtain a copy of any piece of literature or information regarding any product, list the number which precedes it on the coupon which appears below, giving your name, address, and occupation. Return the coupon to Arts & Architecture and your requests will be filled as rapidly as possible. Items preceded by a dot (•) indicate products which have been merit specified in the Case Study House Program.

APPLIANCES

• (426) Clocks: Information contemporary clocks by leading designers, including George Nelson; probably best solution to contemporary clock design. —Howard Miller Clock Company, Zeeland, Mich.

(105a) Gas Ranges, Colored Tops: Illustrated color folder describing new 1951 Western-Holly gas ranges with pastel colored tops; tops available in pastel green, blue, yellow lifetime porcelain enamel to harmonize with kitchen colors; body of range in white enamel to avoid over-emphasis on color; other features include top-burner Tempa-Plates, disappearing shelf, vanishing grille, oversize expandable baking oven; well designed, engineered, fabricated; merit specified Arts & Architecture's 1951 Case Study House. Western Stove Company, Inc., Culver City, Calif.

• (956) Indoor Incinerator: Information Incinor unit for convenient disposal combustible refuse, wrappings, papers, garbage, trash; gas fired, unit is 35″ high, 22″ in diameter, weighs 130 pounds, has capacity of two bushels; heavy steel plate combustion chamber; AGC approved; excellent product, merit specified CSHouse 1950. —Incinor Division, Bowser, Inc., Cairo, Ill.

• (365) Kitchen Appliances: Brochures, folders complete line Sunbeam Mixmasters, Wafflemasters, Ironmasters, Toasters, Shavemasters; recent changes in design well illustrated.—Sunbeam Corporation, Roosevelt Road and Central Avenue. Chicago 50, Ill.

(80a) Select-a-Range: Brochure remarkable Universal Select-a-Range; consists of three basic units permitting 25 variations; makes possible convenience-level cooking, larger work areas, more storage space, greater eye appeal, new versatility, complete flexibility; this data belongs in all files.—Landers, Frary & Clark, New Britain, Conn. A, D, B.

ARCHITECTURAL PORCELAIN ENAMEL

(929) Architectural Porcelain Veneer: Brochure, well illustrated, detailed, on architectural porcelain veneer; glass-hard surface impervious to weather; permanent, color fast, easy to handle, install; lends well to all design shapes; inexpensive; probably best source of information on new, sound product.—Architectural Division, Porcelain Enamel Publicity Bureau, P. O. Box 186 East Pasadena Station, Pasadena 8, Calif.

BARBECUE EQUIPMENT

• (977) Electric Barbecue Spit: Folder Rotir electric barbecue spit with seven 28″ stainless steel Kabob skewers which revolve simultaneously over charcoal fire; has drawer action so unit slides in and out for easy handling; heavy angle-iron, gear head motor, gears run in oil; other models available; full information barbecue equipment, including prints on how to build in kitchen or den; one of best sources information; merit specified CSHouse 1950.—The Rotir Company, 8668 Otis Street, South Gate, Calif.

CABINETS, COUNTER TOPS

(107a) Steel Kitchens: New colorful booklet "Kitchens for Living" includes color photographs of St. Charles Custom-Built Kitchens as well as pictures of many convenience units and special accessories, also reproductions of 10 standard colors. For Architects—this new booklet will be included in our A.I.A. file folder containing dimensional details, specifications and installation information.—St. Charles Manufacturing Company, St. Charles, Illinois.

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DECORATIVE ACCESSORIES

(101a) Transparent Mirror: Full information on Mirropane; looks like mirror when room is brighter than space behind glass, is transparent when there is light behind; coated metallically, not mechanically; durable; particularly adaptable for commercial decoration, effective in sales rooms, exhibits to display merchandise.—Liberty Mirror Division, Libbey-Owens-Ford Glass Company, 9895 Nicholas Building, Toledo 3, Ohio.

ELECTRICAL EQUIPMENT

• (373) Ceiling Ventilating Fan: Brochure Blo-Fan electric ceiling-type residential ventilating fan; removes cooking odors, steam; nine-position switch; some models combined with recessed lights.—Pryne & Company, Inc., 140 North Towne Avenue, Pomona, Calif

• (152) Door Chimes: Color folder Nu-Tone door chimes; wide range styles, including clock chimes.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio. A, D, DR, B, AS, ID, PB, C.

(402) Electric Planning: Brochure electricity in house plans; check lists, suggestions for all types of rooms, typical floor plans, wiring data available only in Northern California.—Northern California Electrical Bureau, 1355 Market Street, San Francisco, Calif.

FABRICS

(97a) California Fabrics: Information line of California fabrics selected for 1950 "Good Design" exhibition Chicago Merchandise Mart, Detroit Institute of Art's show "For Modern Living", A. I. D. exhibits sponsored by Los Angeles County Museum and Taft Museum, etc., "Design for Use, U.S.A." now being assembled by Museum of Modern Art for exhibit principal cities in Europe and Great Britain, merit specified for CSHouse 1950; information available to architects, designers, interior decorators.—McKay, Davis & McLane, 210 East Olympic Boulevard, Los Angeles, Calif.

(955) Contemporary Fabrics: Information one of best lines contemporary fabrics, including hand prints and correlated solids for immediate delivery; Textura by Testa, consisting of small scale patterns creating textures rather than designs; reasonably priced; definitely deserves close appraisal.—Angelo Testa & Company, 49 East Ontario Street, Chicago 11, Ill.

(988) Silks: Information Scalamandre silk fabrics; wide range patterns, designs, colors; one of best sources of information.—Scalamandre Silks, Inc., 598 Madison Avenue, New York, N. Y.

FLOOR COVERINGS

(89a) Carpet Strip, Tackless: Full color brochure detailing Smoothedge tackless carpet strip: Works on curtain stretcher principle; eliminates tack indentations, unever installations.—The Roberts Company, 1536 North Indiana Street, Los Angeles 63, Calif.

(989) Custom Rugs: Illustrated brochure custom-made one-of-a-kind rugs and carpets; hand-made to special order to match wallpaper, draperies, upholstery, accessories; seamless carpets in any width, length, texture, pattern, color; inexpensive, fast service; good service, well worth investigation. —Rugcrofters, Inc., 143 Madison Avenue, New York 16, N. Y.

• (961) Rug Cushion: Leaflet on Spongex sponge rubber rug cushion; greatly increases carpet life, provides luxurious comfort underfoot, creates no dust or lint, easily vacuumed or damp-wiped, has no dirt catching crevices, moth and vermin-proof, never mats down, made of natural rubber, long lasting.—The Sponge Rubber Products Company, 335 Derby Place, Shelton, Conn.

• (309) Rugs: Catalog, brochures probably best known line contemporary rugs, carpets; wide range colors, fabrics, patterns; features plain colors. —Klearflax Linen Looms, Inc., Sixty-third St. at Grand Ave., Duluth, Minn.

FURNITURE

(85a) Contemporary Furniture, Daybed: Information new retail outlet good lines contemporary furniture, accessories; includes exceptionally well designed Felmore day bed; seat pulls forward providing generous size single bed; 4½" thick foam rubber seat, fully upholstered reversible seat cushion, permanent deep coil spring back; frame available in walnut, oak, ash, black; legs aluminum or black steel; reasonably priced, shipped anywhere in country; this is remarkably good piece, deserves close attention.—Felmore Associates, 15221 Sunset Boulevard, Pacific Palisades, Los Angeles, Calif.

HARDWARE

• (16a) Contemporary Locksets: Full color contemporary Kwikset pin-tumbler, cylindrical locksets; clean design, simple operation, precision engineered, rugged construction; unique cam action locking device provides positive knob locking; half-round spindle reduces number working parts; hand-finished in satin, polished chrome, brass, satin bronze; merit specified for CS-House 1950.—Kwikset Locks, Inc., Anaheim, Calif.

HEATING & AIR CONDITIONING

• (798) Boilers, Burners: Brochure, information six sizes vertical tube-type boilers, compact interchangeable oil, gas burners; full specifications; detailed, well illustrated descriptions.—The Aldrich Company, 125 Williams Street, Wyoming, Ill.

(542) Furnaces: Brochures, folders, data Payne forced air heating units, including Panelair Forced Air Wall heater, occupying floor area of only 29—⅜"x9⅜"; latter draws air from ceiling, discharges near floor to one or more rooms; two speed fan.—Affiliated Gas Equipment, Inc., 801 Royal Oaks Avenue, Monrovia, Calif.

(994) Heating Facts: Remarkably well prepared 20-page question-and-answer brochure "How to Select Your Heating System" featuring Lennox heating equipment, now available; practical, readable information by world's largest manufacturers; should be in all files.—Dept. AA-5, The Lennox Furnace Company, 974 South Fair Oaks Avenue, Pasadena.

• (827) Kitchen Ventilating Fans: Well illustrated 4-page folder featuring new NuTone kitchen ventilating fans; wall, ceiling types; more CFM than competitive models in same price range; only screw driver needed to install; quickly removable grille, lever switch, motor assembly rubber mounted; well designed, engineered; merit specified for CSHouse 1950.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

• (72a) Portable Thermostat: Information new E-C portable thermostat for use with any portable electric heater rated up to 15 amperes, 110/125 VAC; plugs in any outlet, heater plugs into adapter; maintains any desired temperature within one-half degree Fahrenheit; no special wiring; ideal for special heat purposes in living quarters, nursery, office, sickroom, bathroom, greenhouse; UL approved, inexpensive, practical; merit specified for

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CSHouse 1950.—Electric Controls, Inc., Swan Island, Portland 18, Ore.

• (907) Quick Heating: Comprehensive 12-page catalog featuring Markel Heetaire electrical space heeters; wall-attachable, wall-recessed, portable; photographs, technical data, non-technical installation data; good buyer's guide.—Markel Electrical Products, Inc., Buffalo 3, N. Y.

INDOOR PLANTING

(900) Indoor Plants: Brochure "Foliage Plants for All Occasions"; well illustrated; professional discounts to architects, designers, decorators; nation's largest wholesale growers of decorative plants.—Roy F. Wilcox & Company, Box 240, Montebello, Calif.

INSULATION AND ROOFING

• (995) Aluma-Life Roofing: Folders, specification data light-weight Aluma-Life roofing; uses aluminum foil, 99.4 per cent pure, between cotton gum base layers with a coating of marble or granite chips of selected colors; rated "A" by National Board of Fire Underwriters, approved by FHA; hurricane specifications; insulation value equals 2" of mineral wool; particularly good for modern design; merit specified for use on CSHouse 1950.—Aluminum Building Products, Inc., Route 1, Atlantic Boulevard, Jacksonville 7, Fla.

• (95) Roof Specifications: Information packed 120-page manual built-up roof specifications featuring P-F built-up roofs; answers any reasonable roofing problem with graphs, sketches, technical data.—Pioneer-Flintkote Company, 5500 South Alameda Street, Los Angeles, Calif.

LANDSCAPING

• (63a) Plants, Landscaping, Nursery Products: Full color brochure most complete line of plants, including rare, trees, nursery products in Southern California; fully qualified landscaping service, consultation both in field and in nursery; firm chosen to landscape six CSHouses, including current Eames-Saarinen CSHouse; best source of information.—Evans & Reeves Nurseries, 255 South Barrington Avenue, Los Angeles, Calif.

LIGHTING EQUIPMENT

• (34a) Accent and Display Lighting: Brochure excellently designed contemporary Amplex "Adapt-a-Unit" Swivelite fixtures; clean shapes, smart appearance, remarkable flexibility, ease of handling; complete interchangeability of all units, models for every type of dramatic lighting effects; includes recessed units, color equipment; information on this equipment belongs in all files.—Amplex Corporation, 111 Water Street, Brooklyn 1, New York.

• (909) Architectural Lighting: Exceptionally well prepared 36-page catalogue architectural lighting by Century for stores, display rooms, show windows, restaurants, museums, churches, auditoriums, fairs, exhibits, hotels, night clubs, terminals; features optical units, downlites, decorative units, reflector units, fluorescent units, spots, floods, strips, special signs, color media, dimmers, lamps, controls; full data, including prices; worth study, file space.—Century Lighting, Inc., 419 West Fifty-fifth Street, New York 19, New York.

(964) Bank, Office Lighting: Brochure planned lighting for banks, office; covers recent advances use standard lighting equipment for architectural, illuminating results and influences properly maintained foot-candle levels to improve efficiency, increase working accuracy, add visual comfort; data costs, installation, maintenance; well illustrated; one of best sources information on subject.—Pittsburgh Reflector Company, 452 Oliver Building, Pittsburgh 22, Pa.

• (965) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, downlights incorporating Corning wide angle Pyrex lenses; recessed, semi-recessed, surface-mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination; selected units merit specified for CSHouse 1950.—Ledlin Lighting, Inc., 49 Elizabeth Street, New York 13, N. Y.

(825) Contemporary Lighting Fixtures: Brochure illustrating complete selection architectural lighting fixtures for every purpose—General Lighting Company, 8336 West Third Street, Los Angeles 48, California.

(782) Fluorescent Luminaries: New two-color catalog on Sunbeam Fluorescent Luminaries; clear, concise, inclusive; tables of specifications; a very handy reference.—Sunbeam Lighting Company, 777 East Fourteenth Place, Los Angeles 21, Calif.

(911) Contemporary Lamps: Each designed specifically for reading, general illumination, or conversation. Direct and reflected glare minimized by large source areas. Most designs utilize the structural possibilities of newly developed durable seamless molded resin impregnated fiberglas.—The Lam Workshop, 316 Washington St., Brookline, Mass.

• (60a) Lamps, Lampshades: New Catalog showing more than 70 modern and rattan lamps and occasional pieces; features Mobile table and floor lamps merit specified for CSHouse 1950; also features Fantasia, 1949 AID lighting award winner designed by George Farkas; belongs in all files.—Decora Designs, 1853 West Flagler Street, Miami, Fla.

• (70a) Portable Ball Table Lamp: Information portable table lamp with 16" brass stem set in brass ball in base; concealed mechanism affords complete universal movement; swivel at top allows spun aluminum housing to rotate in all directions; plastic switch knob turns housing; leaf green, soft white, pewter grey, cherry red, lemon peel baked enamel, or brushed brass finish; designed by Harry Gitlin; merit specified for CSHouse 1950.—Middletown Manufacturing Company, Post Office Box 3440, Middletown, N. Y.

(36a) Slimline Fluorescent: Illumination data, specifications new Collegiate Slimline Fluorescent fixtures; designed for economical, efficient operation in commercial, institutional installations; steps up lightlevels with Duraglo white synthetic enamel finish; single-pin instant starting lamp, no starter needed; piano hinge assemble permits rapid lamp changes; well designed, soundly engineered; overall length 96¼", width 13½"; pendant or pedestal-type mounting.—Smoot-Holman Company, Inglewood, Calif.

(910) Theatrical Lighting: Smartly designed 48-page catalogue showing best in contemporary theater lighting for stage, exhibits, window displays, pageants, fashion shows, dance halls, cabarets, night clubs and fairs by Century; lights, special equipment, control equipment, accessories; one of most complete workbooks published, completely illustrated and with prices; this is a must.—Century Lighting, Inc., 419 West Fifty-fifth Street, New York 19, New York.

(360) Telephones: Information for architects, builders on telephone installa-

tions, including built-in data.—P. E. Dvorsky, Pacific Telephone & Telegraph Company, 740 South Olive Street, Los Angeles 55, Calif.

MOVABLE STEEL WALLS

(917) Movable Metal Walls: Catalog Mills Movable Metal Walls; practical workbook for architects, engineers, contractors on problems in flexible division of interior space; emphasizes advantages movable walls; fully illustrated, complete detailed construction drawings, specification data; probably best source of information this subject. —The Mills Company, 975 Wayside Road, Cleveland 10, Ohio.

PAINTS, SURFACE TREATMENTS

• (938) Paint Book: New 47-page paint book featuring General Paints: full architects' specifications, more than 200 color samples, complete catalog of finishes; full descriptions paints, enamels, varnishes, lacquers, etc.; invaluable information on finishing all surfaces, including plaster, hardwood, close-grained woods; this is a must for all files.—General Paint Corporation, 2627 Army Street, San Francisco 19, Calif.

PANELS AND WALL TREATMENTS

• (902) Building Board: Brochures, folders Carrco Wallboard, which is fire resistant, water resistant, termite proof, low in cost, highly insulating, non-warping, easy to work, strong, covered with one paint coat, finished on both sides, semi-hard, and uniform; 4'x8' sheets ¼" in thickness; merits close attention.—L. J. Carr Company, Post Office Box 1282, Sacramento, Calif.

(970) Douglas Fir Plywood: Basic 1950 catalog giving full data Douglas Fir Plywood and its uses; deliniates grades, features construction uses, physical properties, highlights of utility; tables on nail bearing, acoustics, bending, rigidity, insulation, condensation; full specification data; undoubtedly best source of information, belongs in all files.—Douglas Fir Plywood Association, Tacoma Building, Tacoma 2, Wash.

• (585) Etchwood Panels: Literature Etchwood, a "3-dimensional plywood" for paneling, furniture, display backgrounds; soft grain burnished away leaving hardwood surface in natural grain-textured surface; costs less than decorative hardwood plywood; entireiv new product, merits close consideration. — Davidson Plywood & Lumber Company, 3136 East Washington Boulevard, Los Angeles, Calif.

(997) Metal Wall Tile: Information Crown Steel Wall Tile; will not rust, chip, crack, craze, peel; lightweight, does not require heavy substructure; wide color range, available in stainless steel; a surety bond supplied for each installation; product warrants close appraisal.—Ohio Can & Crown Company, Massilon, Ohio.

PLUMBING FIXTURES, ACCESSORIES

(826) Bathroom cabinets: Folder bathroom cabinets, one piece drawn steel bodies, bonderized after forming; also chrome bath accessories and wall mirrors.—F. H. Lawson Company, Cincinnati, Ohio.

(55) Water Heaters, Electric: Brochure, data electric water heaters; good design. — Bauer Manufacturing Company, 3121 W. El Segundo Boulevard, Hawthorne, California.

RADIOS

• (948) Record Changer: Literature, data new Markel 3-speed Playmaster, only complete 3-speed changer that automatically plays all speeds and all sizes of records and automatically plays

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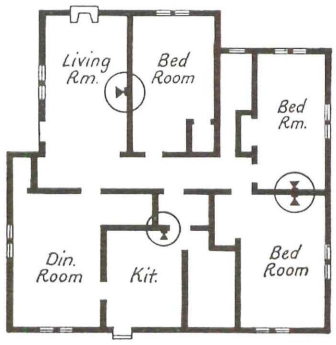
Blueprint for modern homes–
Extra outlets, concealed wiring



Signs of a thoughtful builder are the convenient telephone outlets included in his blueprint. Here the customer may add new extensions in the kitchen and bedrooms later on as they are needed . . . inexpensively. These outlets also may be used for portable telephones.

Beautiful walls won't be marred by exposed wiring if built-in conduit is planned in advance. Low-cost, concealed wiring is easy to install, means extra customer appreciation. *For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

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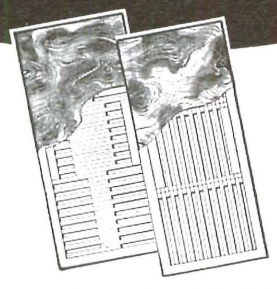

✓ Horizontal grain Finnish Birch hardwood panels—the wood of character—for distinctive beauty.
✓ They stay Flush—rails and stiles made of minimum 2½ inch width kiln-dried Norway Pine.
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COMPETITION FOR GARAGE DOORS

Co-sponsored by the
Tavart Company, Paramount, California

RULES: This competition is opened to all architects, engineers, designers, draftsmen and students.

Members of the co-sponsoring company, and the staff (both active and advisory) of this magazine, are ineligible.

Competitors may enter more than one project.

Competitors agree on entering the competition that the decision of the judges will be final in all cases.

Drawings and plans submitted will not be returned unless specifically requested and will be available for use by the magazine for publication purposes and by the Tavart Company for publicity and advertising purposes.

REQUIREMENTS: Drawings (mandatory)—Drawings will be on two sheets of stiff white cardboard, or on opaque paper, mounted. Drawings will be in undiluted black ink. The sheets will be 16x20 inches. The drawings will be placed horizontally within one inch of any edge.

No identification mark, device, or symbol will appear on the drawings. The competitor will print on two plain cards, 2x3 inches his name and address. Cards will be sealed in opaque envelopes, the envelopes to be secured to the back of each mount with tape. On receipt, drawings will be numbered for identification, and the competitor's identity determined in the presence of the jury after the awards are made.

Drawings are to be securely wrapped in stiff board, flat, and mailed or delivered to the office of the magazine ARTS & ARCHITECTURE, 3305 Wilshire Boulevard, Los Angeles 5, California. Mailed packages must bear the post office cancellation of no later than midnight, April 27, 1951.

Drawings are submitted in this competition at the competitor's risk. Reasonable care will be exercised in handling, safekeeping, and packaging for return. It is suggested that contestants signify their intention of entering the competition in order that additonal information might be sent them.

The competition closes at midnight April 27, 1951. No packages postmarked later will be accepted. Winners will be announced in the June issue.

The prize awards will total $1,500:

$1,000 for first prize and five $100 honorable mentions. The prizes will be awarded for the best garage doors which:

1. *Can be built by the average mechanic on-the-job.*
2. *Can be built from materials readily available from the average lumber yard.*
3. *Use Tavart garage door hardware (details may be had on application to the magazine).*
4. *In the case of standard doors 8 feet wide by 7 feet high, weight to be under 175 pounds; and in the case of standard door 16 feet wide by 7 feet high, weight to be under 350 pounds.*

Entries should include the material list, an estimate of the time required to build the door on-the-job and at least one sketch showing the door in place in a modern house.

---

both sides of 10" and 12" records continuously in sequence; handles 12 12" 33-1/3 records for total of 9 hours playing time; remarkably well engineered; this item must for all interested in sound equipment.—Markel Electric Products, Inc., 145 Seneca Street, Buffalo, N. Y.

SASH, DOORS AND WINDOWS

(522) Awning Windows: Brochure Gate City Awning Windows for homes, offices, apartments, hotels; controlled by worm and gear drive operating two sets of raising mechanisms distributing raising force to both sides of sash; standard and special sizes; contemporary design.—Gate City Sash & Door Company, 15 Southwest Third Avenue, Fort Lauderdale, Fla.

• (901) Hollow Core Flush Door: Brochure Paine Rezo hollow core flush door featuring interlocking air-cell grid core combining the strength of cross-banded plywood with lightness in weight; accurately mortised and framed together, and overlaid with matched resin-glued plywood panels; one of best products in field.—L. J. Carr and Company, Post Office Box 1282, Sacramento, Calif.

• (927) Rubber Weatherstripping: Brochure, folders Bridgeport Inner-Seal Weatherstripping; spring wire, rubber construction; remarkable wearing qualities, easy to install; waterproof, won't stain sills, resilient, inexpensive; a remarkably well engineered product merit specified for CSHouse 1950.—Bridgeport Fabrics, Inc., 165 Holland Avenue, Bridgeport 1, Conn.

(38a) Store Fronts: Information Natcor Store Fronts; fully extruded alumilited aluminum mouldings and entrances; narrow stile doors and jambs; sturdy, modern; specification data and engineering aid available. — Natcor Store Fronts, Taunton, Mass.

SPECIALTIES

(106a) Accordion-Folding Doors: Brochure, full information, specification data Modernfold accordion-folding doors for space-saving closures and room division; permit flexibility in decorative schemes; use no floor or wall space; provide more space; permit better use of space; vinyl, durable, washable, flame-resistant coverings in wide range colors; sturdy, rigid, quiet steel working frame; sold, serviced nationally; deserves closest consideration.—New Castle Products, Post Office Box 823, New Castle, Ind.

(21a) Folding Stairway: Information EZ-Way Folding Stairway; light pull on cord brings stairway through trap door; light push sends it back up; brings more usable space to homes, cottages, garages; well conceived product meriting consideration.—EZ-Way Sales, Inc., Post Office Box 300, St. Paul Park, Minnesota.

• (59a) Paper Table Mats: Information, samples paper table mats with contemporary designs; come in sets of 24, celophane wrapped, each package one design but in three different colors; priced so they can be discarded after one use; good answer to table setting problem.—Siok-Howell Designs, 14 School Street, Danielson, Conn.

(25a) Prefabricated Chimney: Folder entitled "Vitroliner Type 'E' Flue"; functions as a complete chimney for all home heating equipment; individually designed to fit the particular roof pitch of house with tailor-made roof flashing and flue housing; made of heavy-gauge steel, completely coated with acid-resisting porcelain; low initial cost; installs in two hours, light weight, saves floor space, improves heating efficiency, shipped complete in two cartons; listed by UL for all fuels; good product, definitely worth investigation. —Condensation Engineering Corporation, 3511 W. Potomac, Chicago 3, Ill.

(973) Quick Setting Furring Cement: Information Acorn Furring Cement; sets wood trim, base, panel furring or floor sleepers to concrete and masonry without plugs, bolts or any other mechanical support; sets trim in straight lines without shims or spacers; solid in 90 minutes; test show high strength. —Acorn Adhesives & Supply Company, 1011 West Eleventh Street, Los Angeles 15, Calif. RIchmond 7-5338.

(23a) Swimming Pools: Well prepared book "Planning Your New Swimming Pool" giving full data Paddock swimming pools; nationally known, widely accepted; one of best sources of information on subject. — Paddock Swimming Pools, 8400 Santa Monica Boulevard, Los Angeles 46, Calif.

STRUCTURAL BUILDING MATERIALS

(933) Custom Stock Store Front Metals: Information Kawneer Custom-Styled Stock Metals for store fronts; permit custom styling, clean-lined simlarge glass areas in residential and Kawneer stock metals; less costly than ing, detailing; good product, worth made-to-order specials; eliminates draft-thorough investigation.—The Kawneer Company, 289 North Front Street, Niles, Mich.

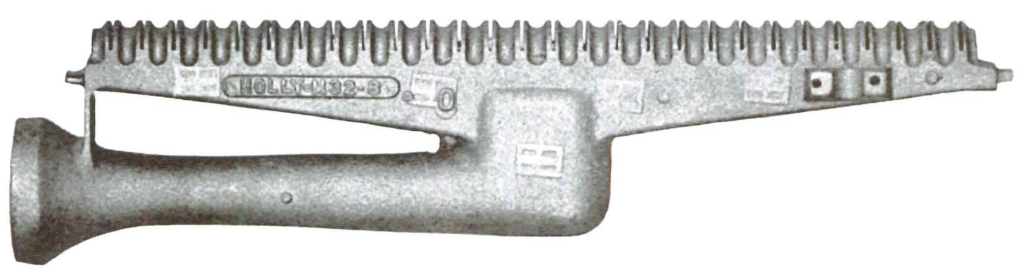
(3a) Interlocking Building Block: Information new Hydro-Stone interlocking building block; made entirely from waste materials, eliminates use of mortar; resembles cut stone, granite or marble; made with patented tongue-and-groove design within tolerances of 5/1000"; mastic put on with hand spray gun as assembled insures against moisture; contents include sand, oyster shells, iron ore waste, crushed brick, coal mine tailings, stone dust, or whatever material is most available locally; remarkably inexpensive, worth consideration; manufacturing franchises now open.—Hydro-Forged Stone Associates, Inc., 434 Bulkley Building, Cleveland, Ohio.

(712) Sliding Steel Doors: Side Sliding steel doors and fixed sash for commercial buildings; high quality, fully guaranteed; assembled at factory and delivered ready for installation; standard types and sizes illustrated details given: Arcadia Metal Products, 324 North Second Avenue, Arcadia, Calif.

(107a) Steel Base Construction: Full information Corruform, 100,000 psi steel base for concrete in joist construction; developed to provide extra-tough, secure steel base maintaining structural principles, structural integrity; corrugated pattern makes attractive exposed ceiling; performs adequately without waste; carries concrete without sag, stretch, bend, leakage; standardized .0156 gauge, 2 3/16"x½" deep corrugations; weight ¾ pound per square foot with fasteners; good product, merits investigation.—Granco Steel Products Company, Granite City, Ill.

VISUAL MERCHANDISING

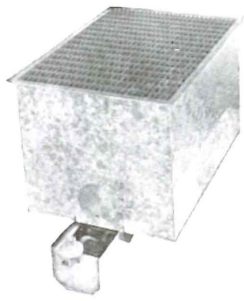
(939) Visual Merchandising Presentations: 80-page brochure of metal display and merchandising fixtures; merchandising ideas and suggestion, layouts, presentations, all affording maximum display space in minimum floor area; this is, without a doubt, one of the best manuals of its type offered today.—Reflector-Hardware Corporation, Western Avenue at Twenty-second Place, Chicago 8, Ill.



PRODUCTS OF THE WEST

Stubby dual floor furnace

Outlet for Secondary Heat Exchanger



Stubby flat floor furnace

HOLLY MANUFACTURING CO., PASADENA, CALIFORNIA

If, as some contend, America's industrial strength is in danger of being weakened by a lessening of competition at certain levels, an answer to that threat is likely to come from the daring and originality of a rapidly growing industrial West.

In the architectural and building fields, especially, improvements in product engineering and design are awakening widespread national interest.

Old line manufacturers of heaters, for example, are feeling the impact of new products made by the Holly Manufacturing Company, Pasadena, California.

In 1943 Holly introduced a new type of shallow floor furnace known as "Stubby," which sent engineers of heater companies throughout the country scurrying to their drafting boards. Again this year, the industry was interested in the advanced design of Holly's new "NarroWall" heater, with fuel-economizing Secondary Heat Exchanger. The indomitable pioneering spirit of J. Stanley Johnson, president and founder, is largely responsible for the unusual development of Holly within a comparatively short period of time.

When in 1938 Mr. Johnson took over the defunct Foss Heating and Engineering Company with more determination than money—and one employee—he went into production on the Foss gravity and forced-air heating unit designs.

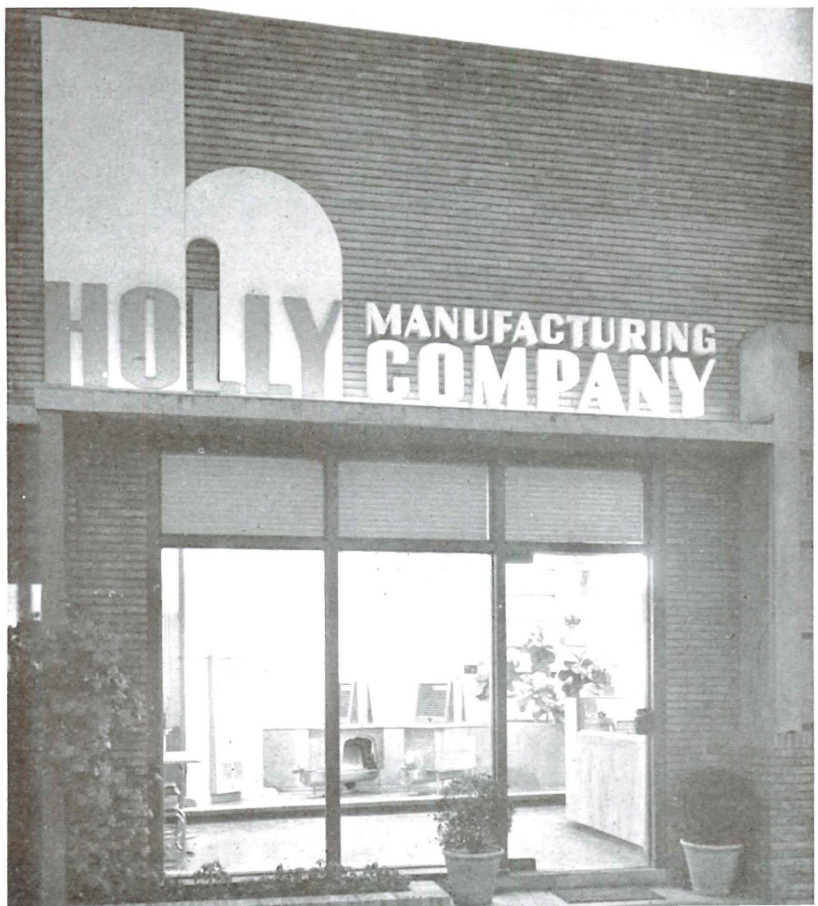
He encountered most of the same problems, and more, that forced Foss out of business. After regrouping his forces, he applied himself to designing better products that could be built at more competitive prices.

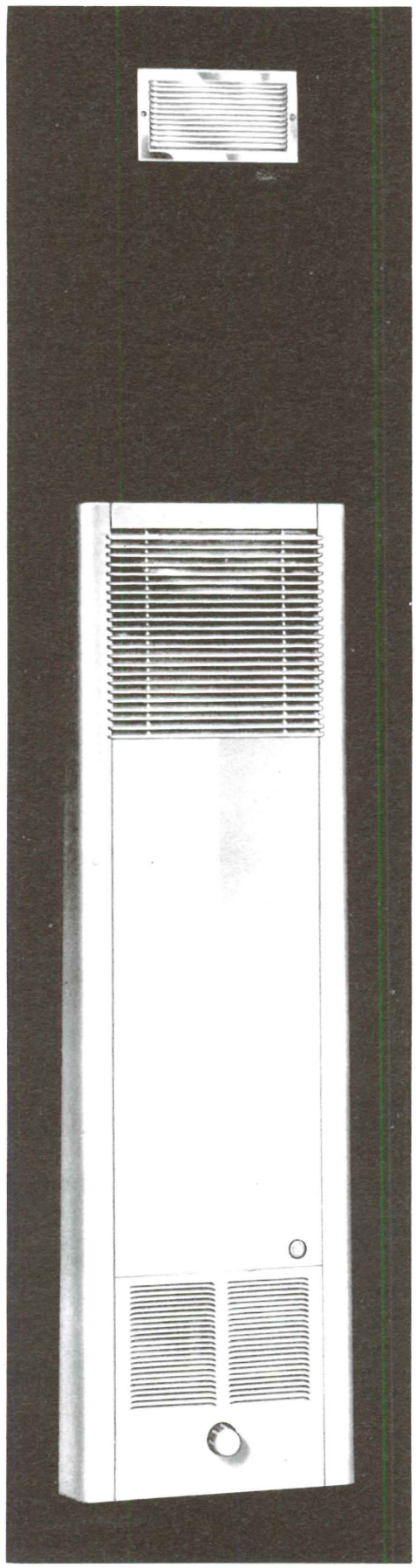
Between that time and his present achievements, Mr. Johnson has undergone many severe trials. His plant was destroyed by fire; he had to contend with government housing restrictions; war-time manufacturing and housing prohibitions; and conversion to defense production.

Through it all, Stan Johnson held to his original purpose and plan—to build better gas heaters at competitive prices.

Evidence of his success is found in the constantly growing demand for Holly products throughout the country. More evidence is in the following pages where a brief story about the plant and men behind those products is presented.

This is the second of a series of industrial supplements with the running title "PRODUCTS OF THE WEST," through which the magazine Arts & Architecture throws its spotlight on outstanding examples of Western industrial enterprise.





Holly's' latest contribution for solving home heating problems is this new NarroWall Heater. Among its salient features is the Secondary Heat Exchanger which is said to circulate about 25 per cent more warm air by saving heat ordinarily lost through the vent. Louvers have been designed to direct warm air away from the wall into the room.

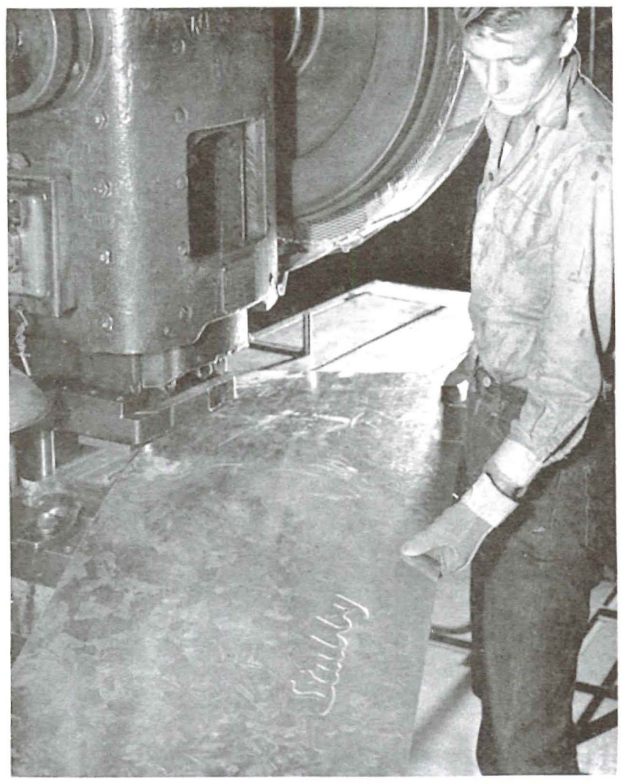
Production begins at the point (above) where steel sheets are being lifted from the stock pile.

They are then conveyed to the power shear department where they are cut to required sizes.

PHOTOGRAPHS BY JAMES REED

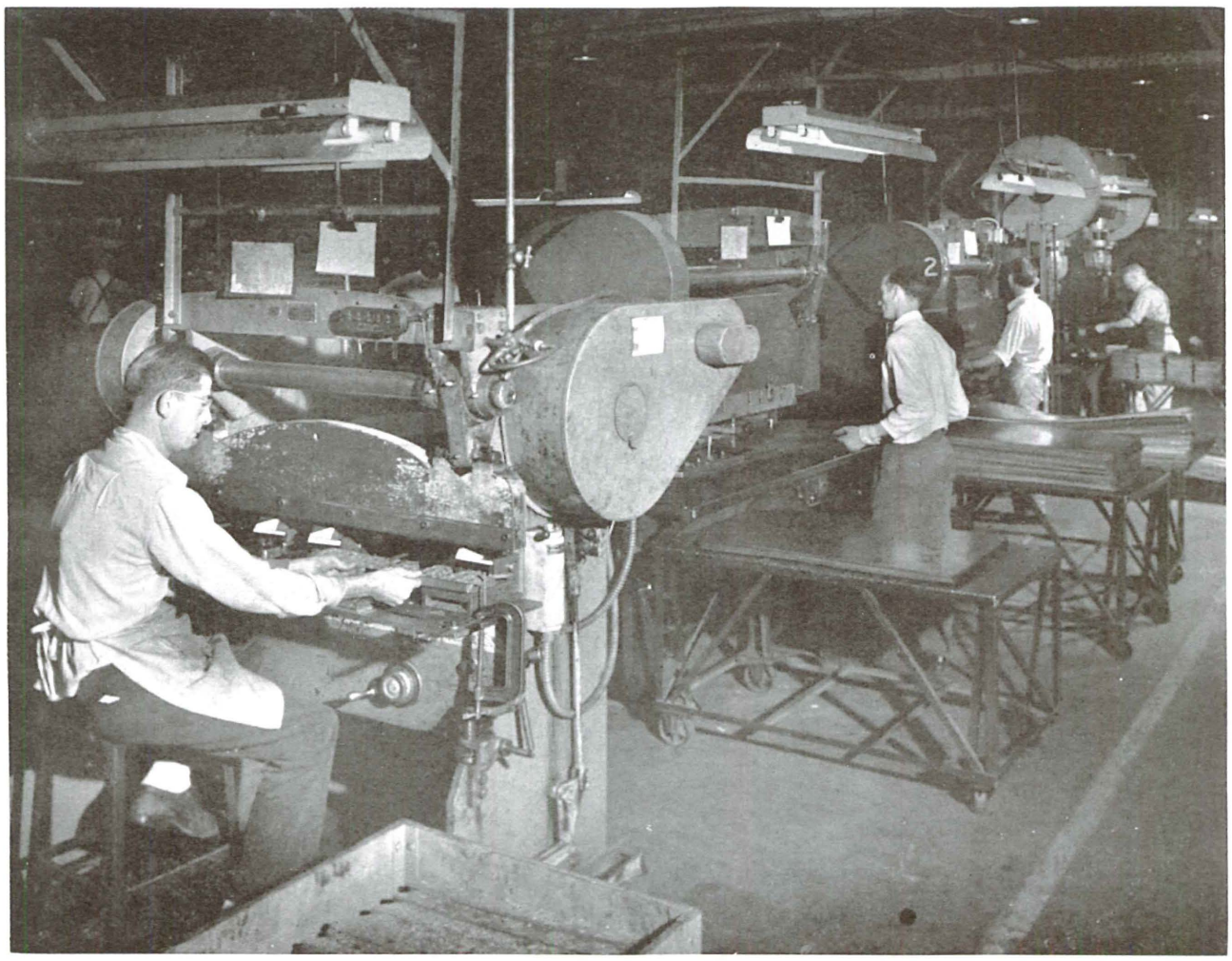
On the right the widely known "Stubby" trade name is being embossed on a sheet of heavy, galvanized, hot-dipped steel. This will be used as an outer casing which is formed to prevent disturbing expansion noises during heating and cooling.

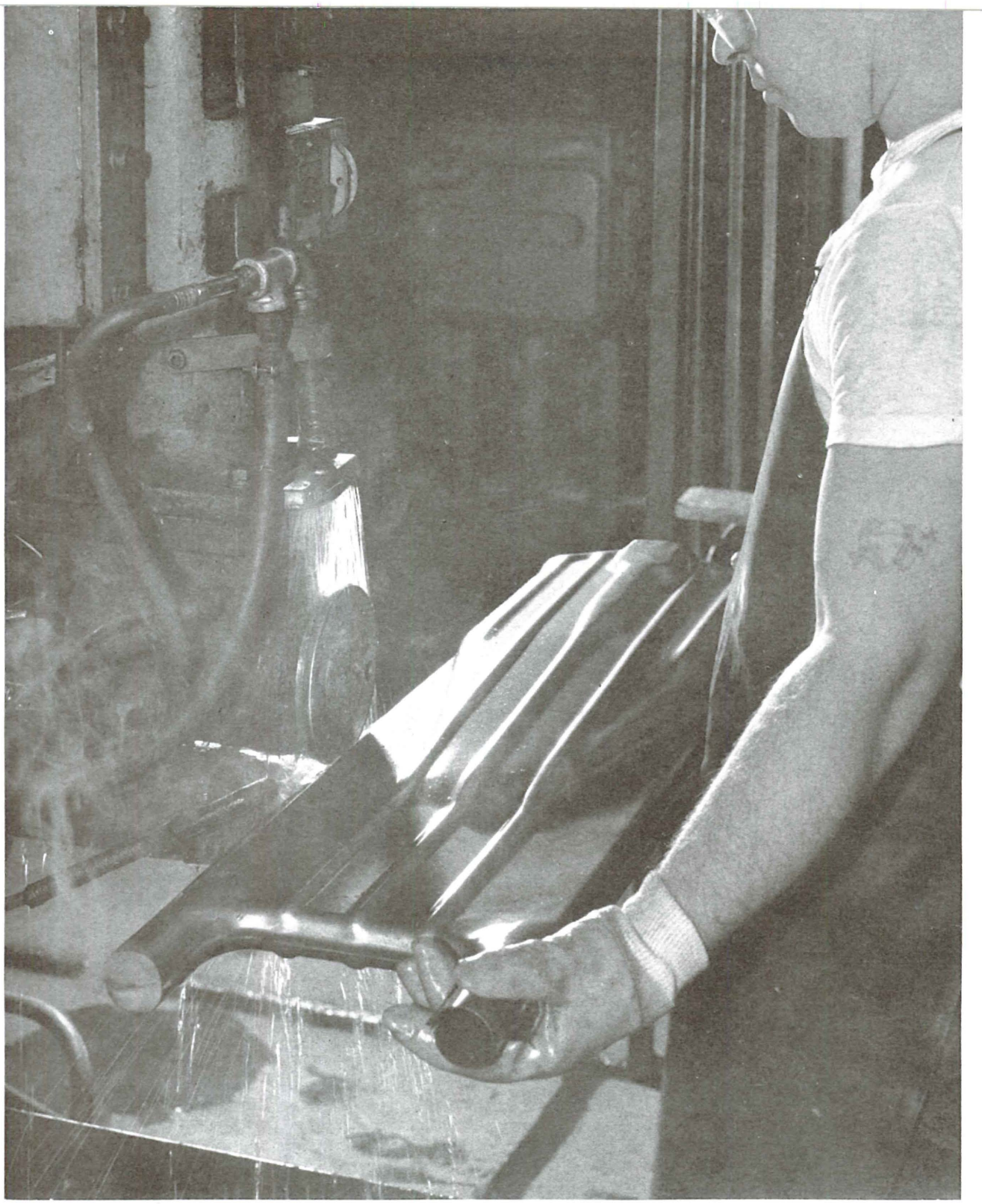
Below, 50-ton punch presses are blanking out outlet holes. Wide air passages in Holly's floor furnaces reduce air velocity, minimize frictional losses and contribute to a very large flow of circulating warm air.



Above, power brake is forming a 90-degree angle in a panel side rail for the new model "NarroWall" heater—the first wall heater to be awarded approval under the control heating requirements of the 1950 American Gas Association.

Four of a battery of five power brakes below, are notching, piercing, and forming wall heater parts.





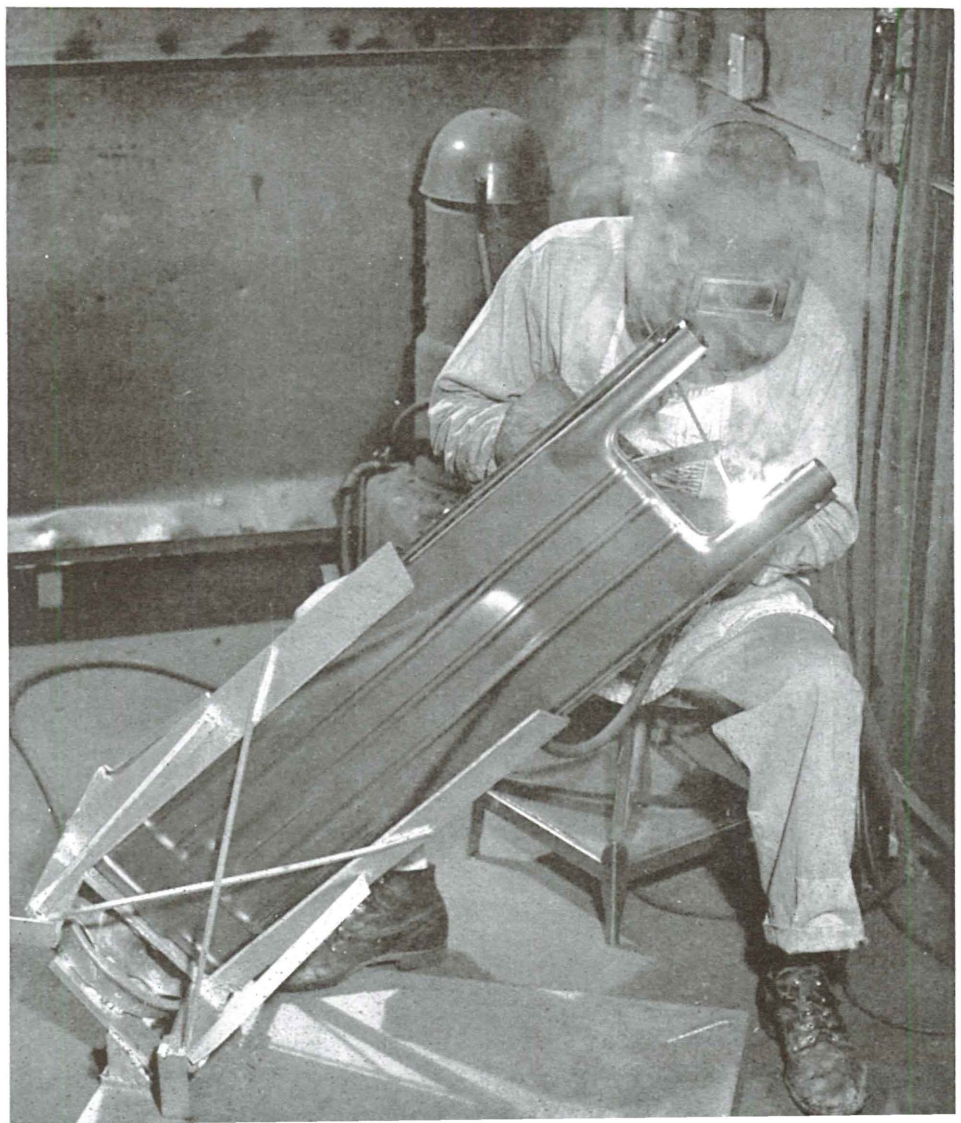
Here a wall heater combustion chamber is being seam welded to insure a sealed, gas-tight unit. This is "the heart of the heater." Its surface is contoured for maximum heat transfer surface without using baffles, thus eliminating baffle noises, and baffle deterioration.

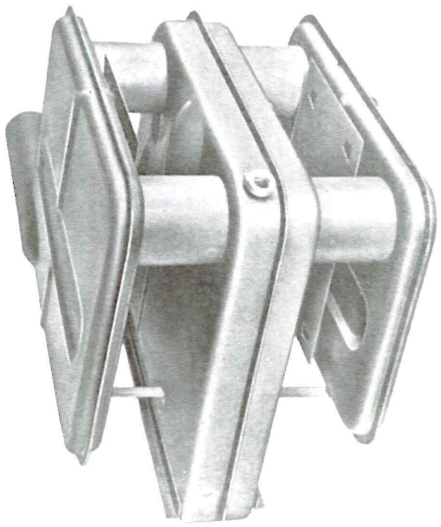
To the right, a "Stubby" draft diverter is being spot welded. Large open areas for extra air volume are a basic design characteristic of Holly furnaces. This contributes to easy cleaning, an important feature since regular cleaning is an essential for any furnace.

Gas welding lighter tubes.

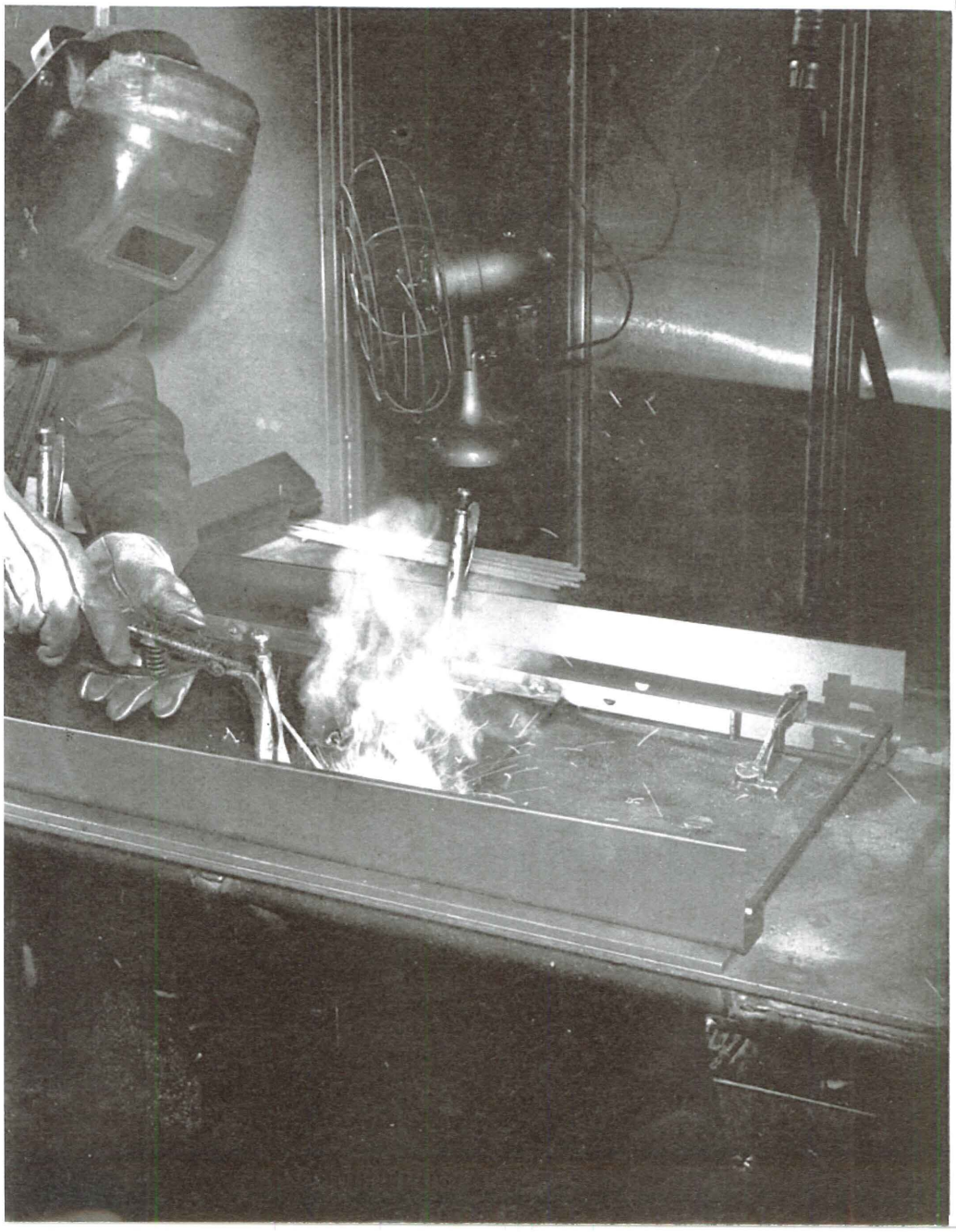
The Lighter hole in the Holly floor furnace combustion chamber (above) is placed at one end to make it easily accessible by simply lifting the floor grille. The transparent lighter hole cover is hinged to stay in position when opened.

Right: Arc welding seams in a wall heater combustion chamber. The revolving jig being used here was suggested by an employee. It not only gives greater ease of handling in this operation but also projects a brilliant light into the interior for rigid seam inspection.





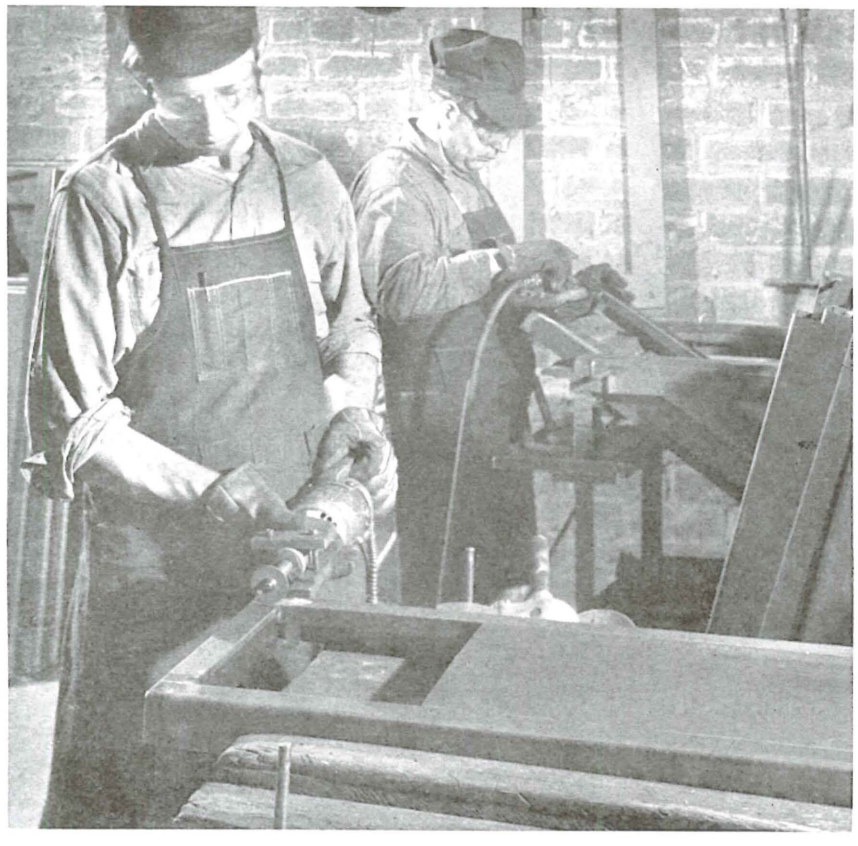
Left: a complete heat transfer unit for a "Stubby" floor furnace. The embossed surface gives more efficient heat transfer and quiet operation.



The two welding operations shown on this page complete the wall heater front panel assembly. Above: the panel frame parts are aligned and held in a jig for gas welding. The panel itself is next arc welded into place, below. Walter Dorwin Teague designed the new "NarroWall" panel.

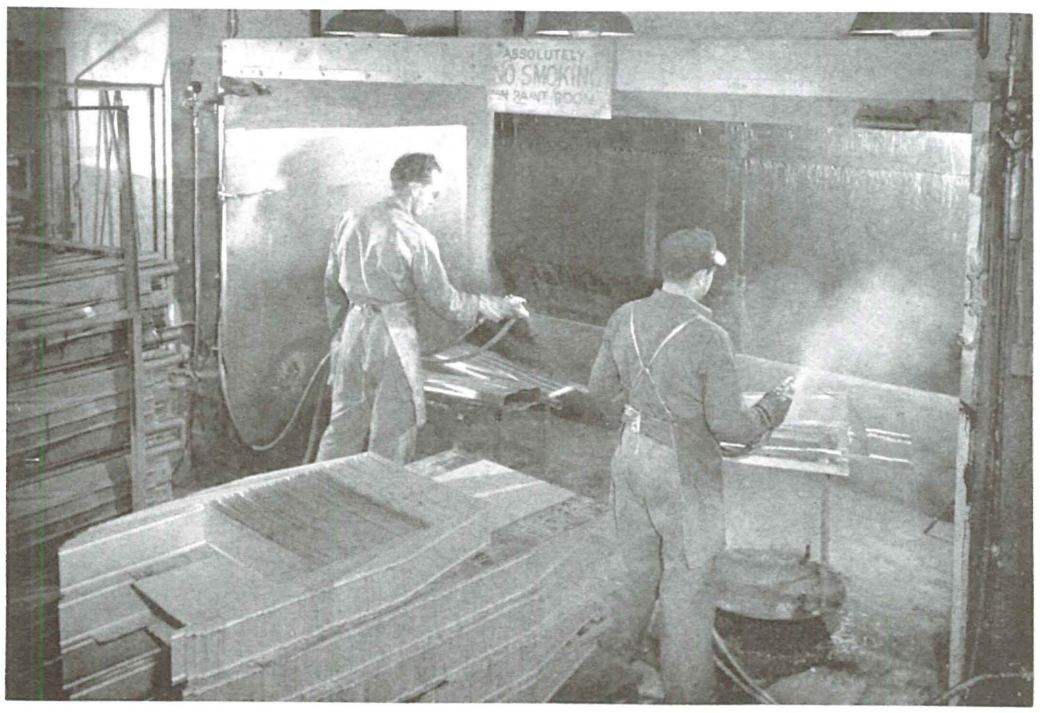
Since the Holly "NarroWall" is a circulating type of heater, the panel is protected from the heating element by a shield so that there can be no burn or scorching from contact with it.

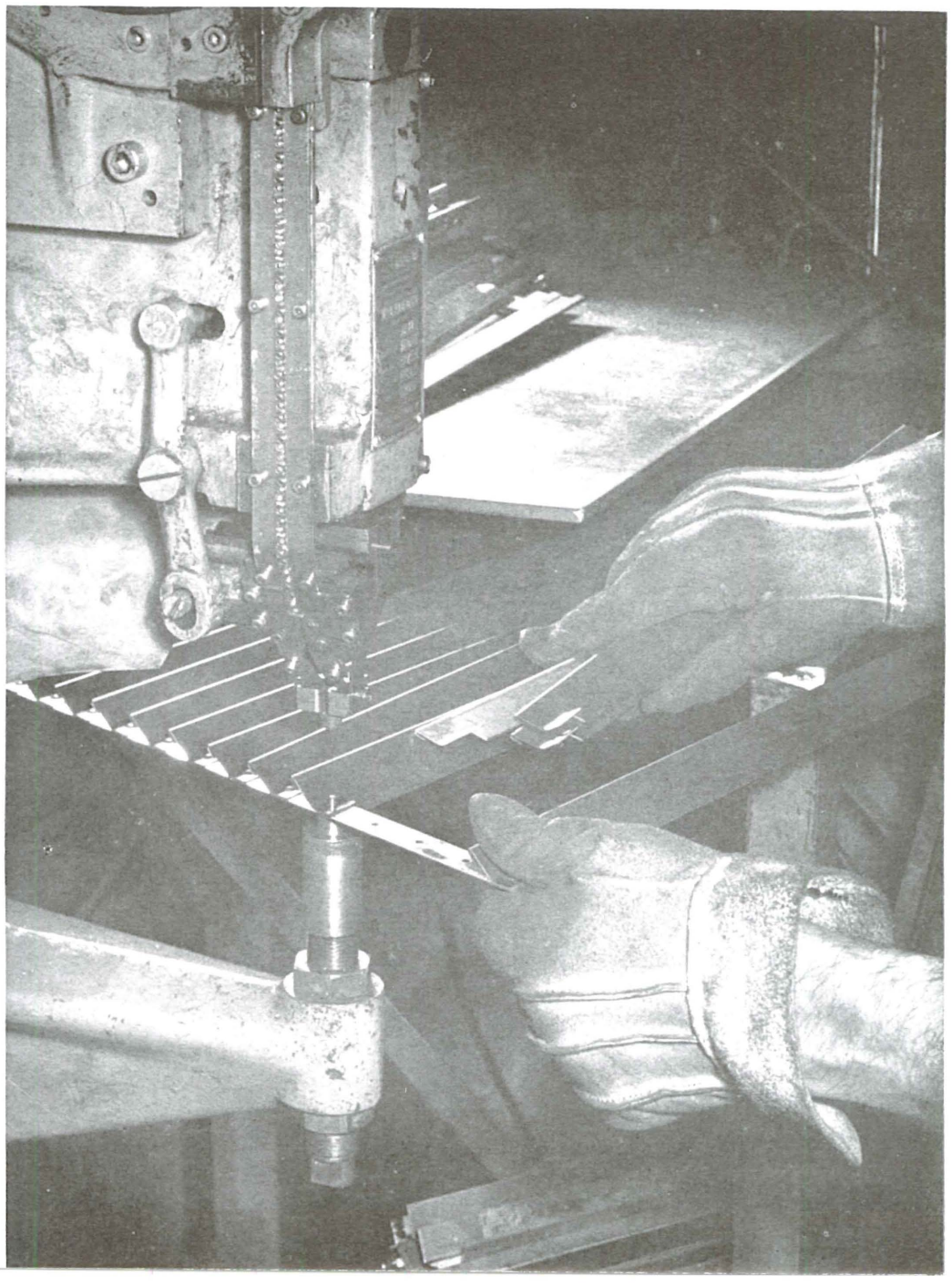
Finish grinding and buffing of the panel.



All components that go into final Holly product assemblies are subject to rigid inspection to assure quality control and strict adherence to engineering specifications. This requires precision work and close cooperation between production personnel and inspectors.

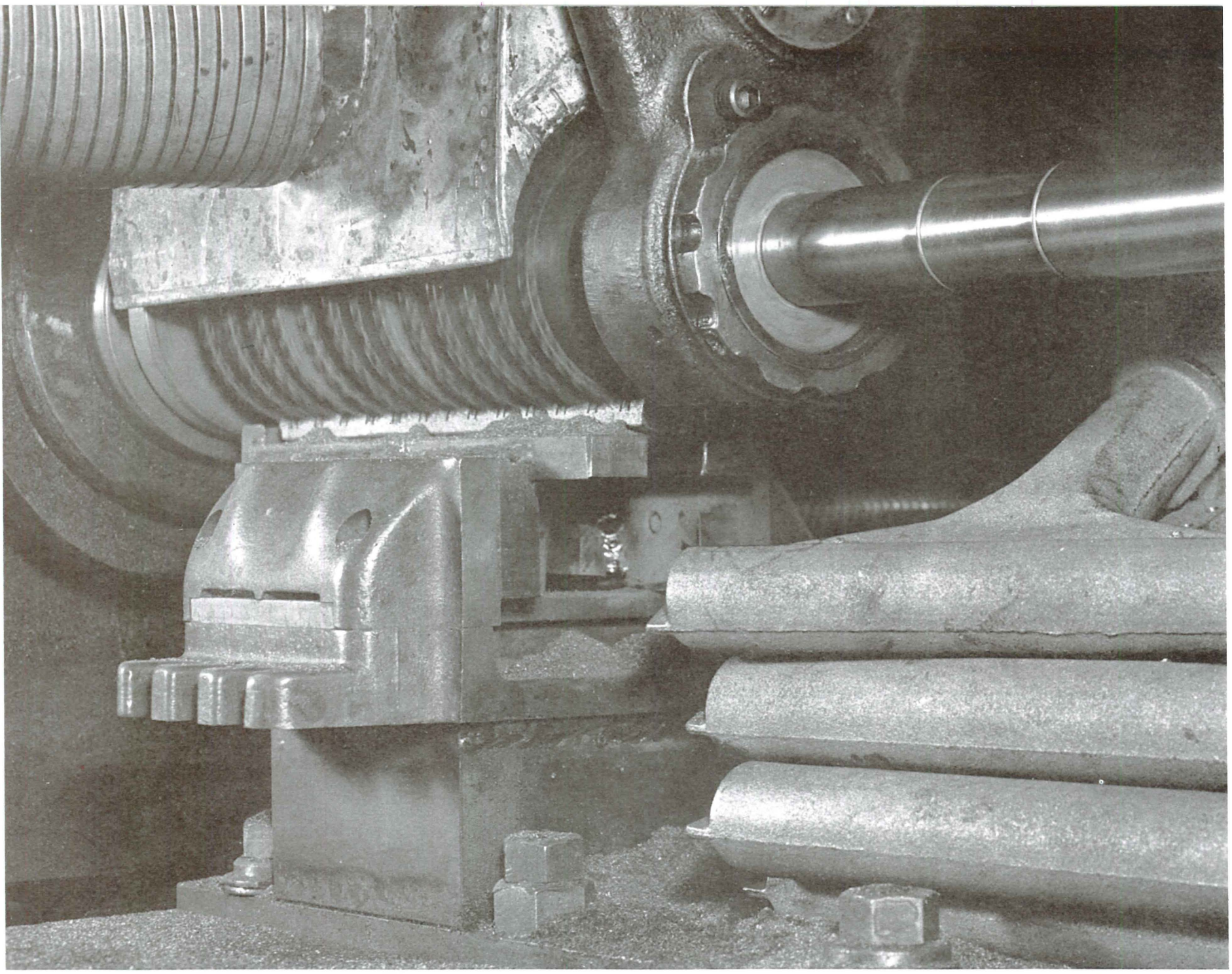
On the right, one of the many inspectors (in white coat) is discussing a question of quality control with a shop supervisor.

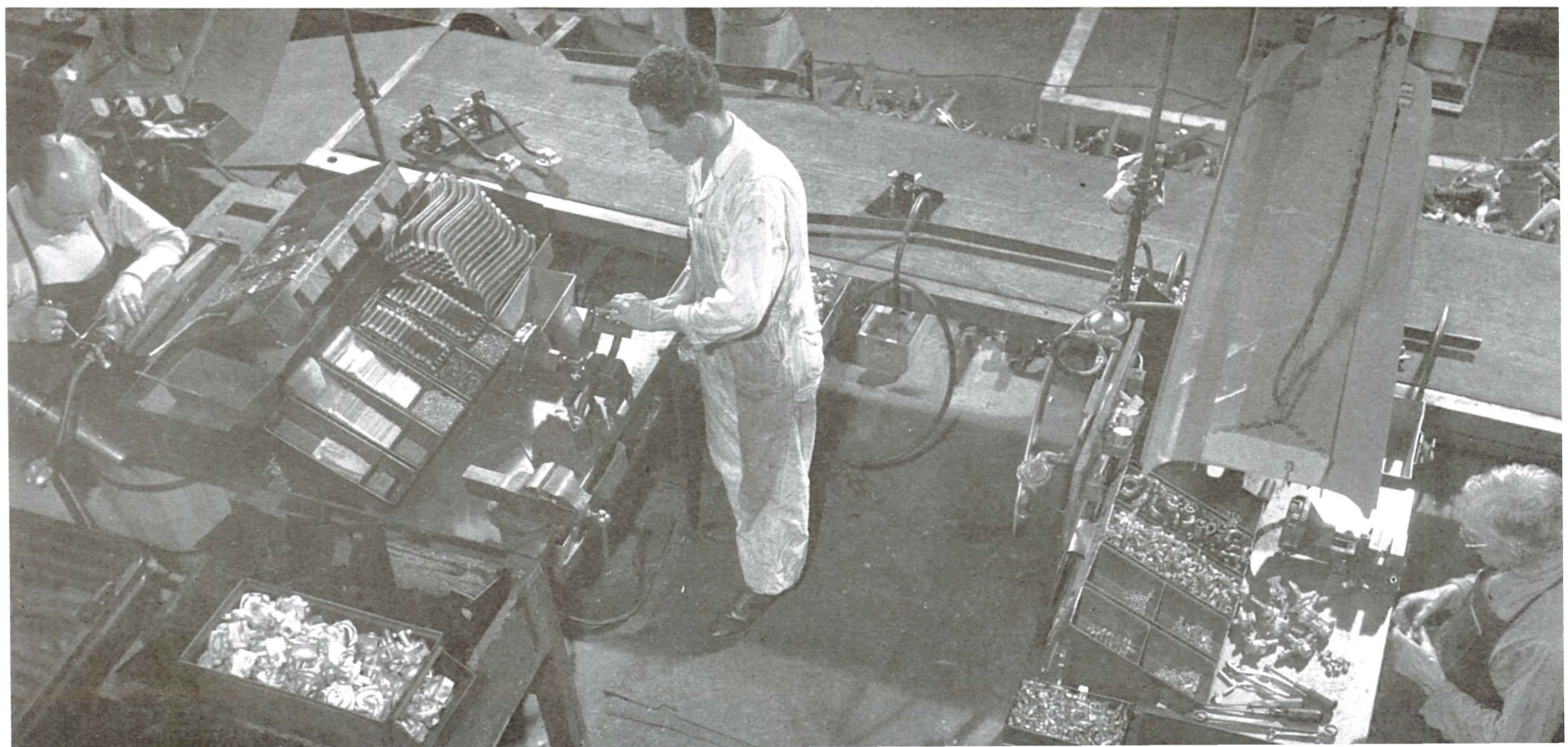




The paint room is seen in the top picture. Here a protective paint coating is sprayed on various unexposed parts to prevent corrosion.

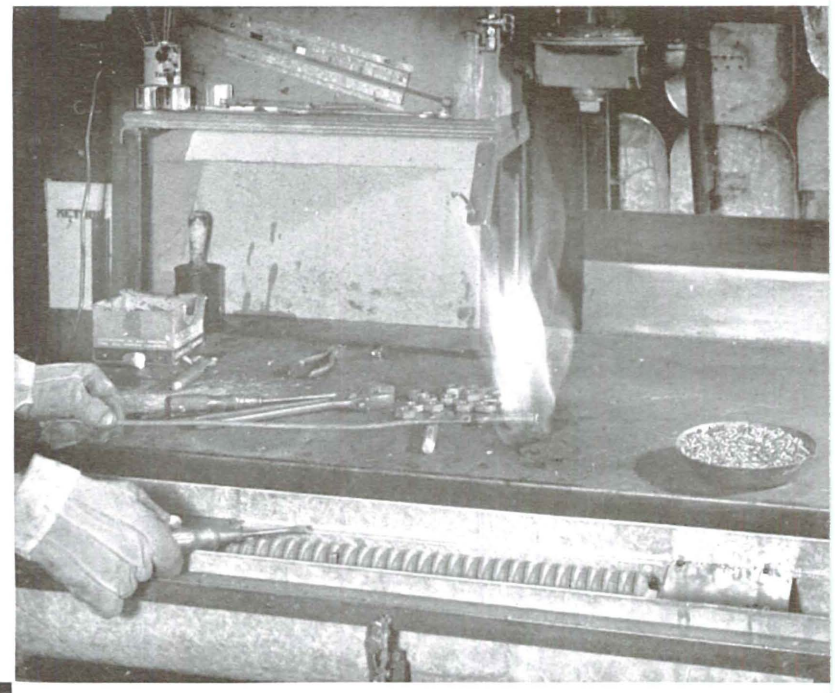
In the lower picture, louver bars are being riveted to a "Clearflo" dual register assembly. The register is another of the many engineering innovations incorporated in the "Stubby" furnace. The louvers are pitched at an angle to direct warm air out into the room and away from the wall. They also give a directional flow for better heat distribution within the room. Hoods or other protective devices to shield wall surfaces are therefore made unnecessary.



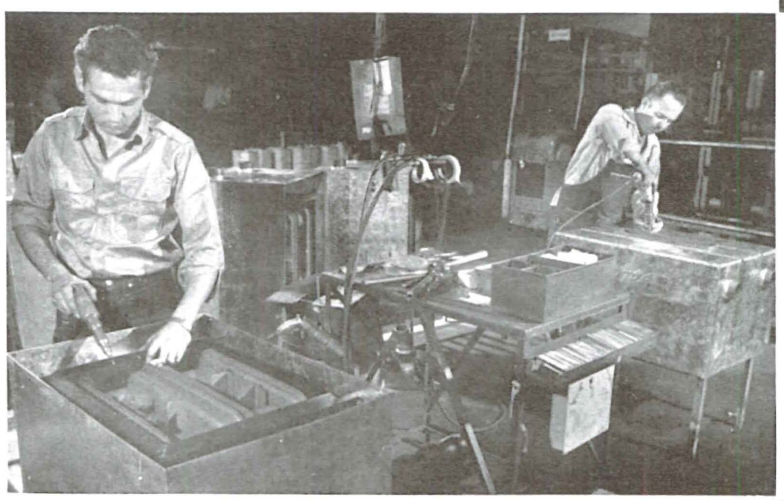


Operation above on the opposite page shows high-speed milling of a burner casting.

Two feeder stations assembling burner manifolds are shown in the lower picture on the left. The assemblies are then conveyed to the final test station at upper right on the opposite page.

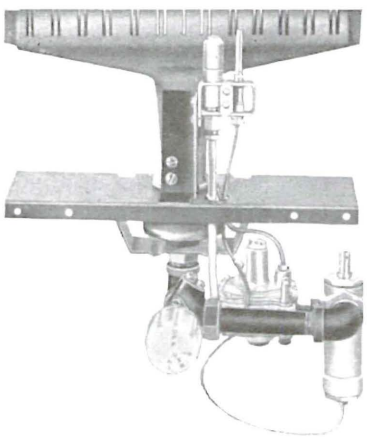


Exhaustive tests under actual "in use" conditions are made on the operations and adjustments of each manifold and burner assembly. This assures correct BTU rating and exact performance of controls.



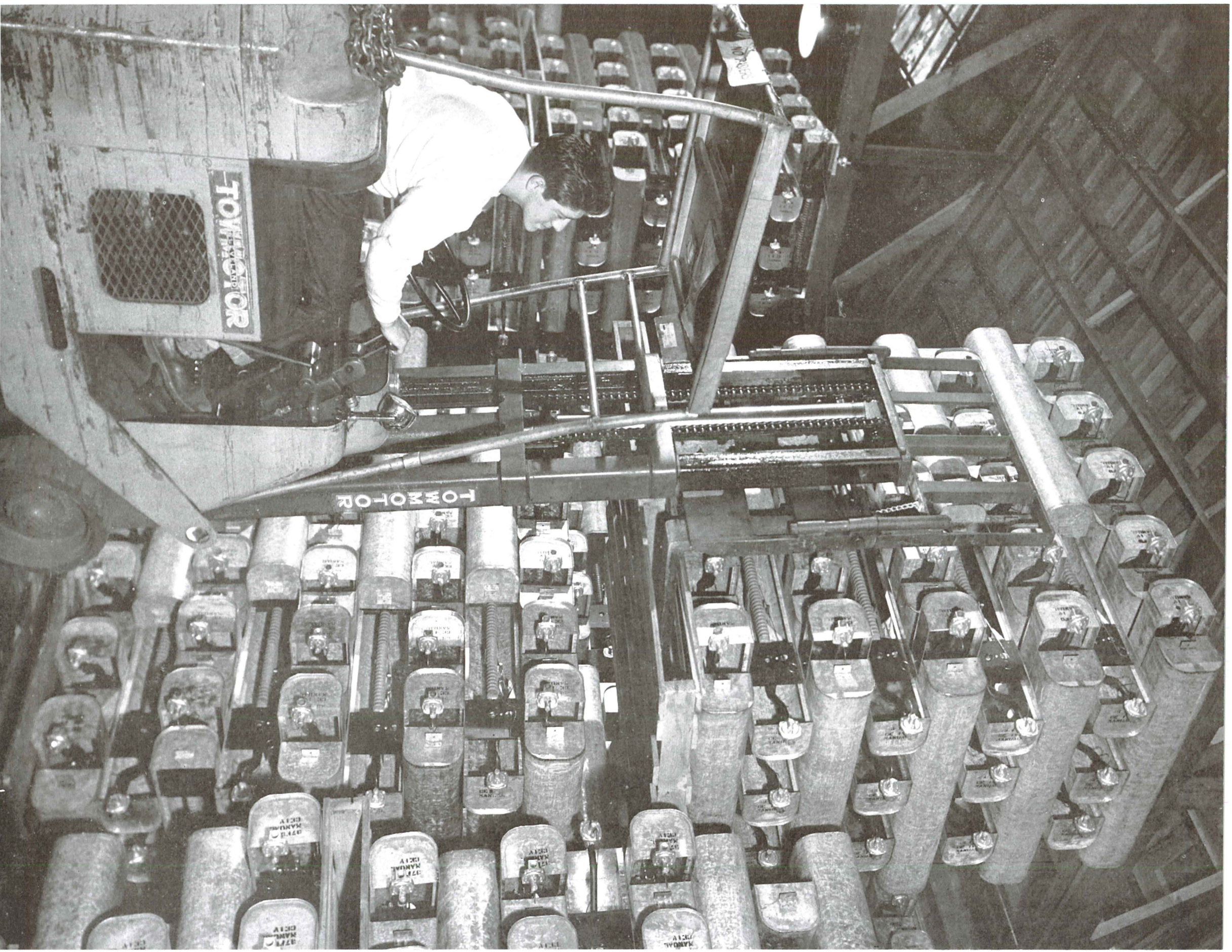
Final inspection and assembly of "Stubby" floor furnaces.

The completed wall heater panels going through final assembly and cartoning.



At the left is shown the new Holly interchangeable burner and control unit.

This represents another engineering step forward. Servicing or converting to any of the six different types of control units made by Holly is accomplished by simply removing four sheet-metal screws. Repairs can be made on an exchange basis without interruption of service. To change from a manual control unit to automatic Unitrol requires only an estimated ten minutes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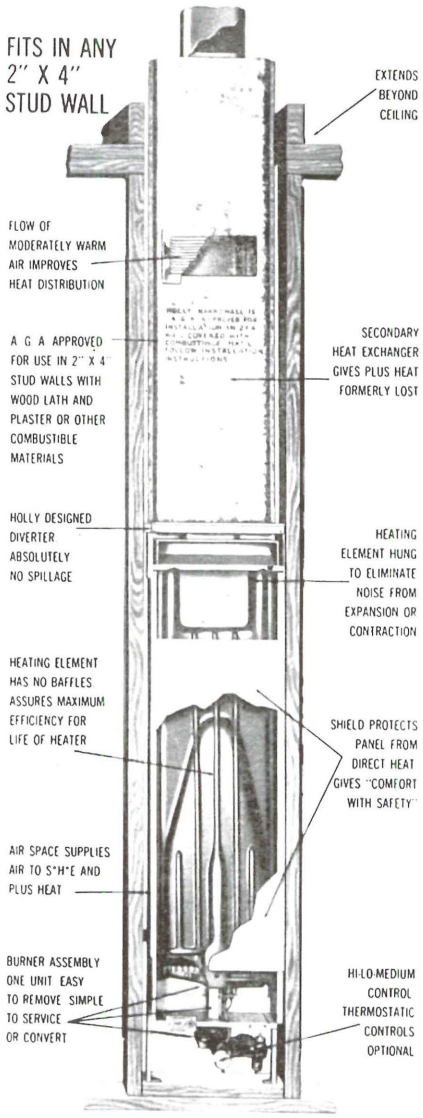


Top end of the S.H.E. extends into the attic area simplifying installation of the vent pipe.

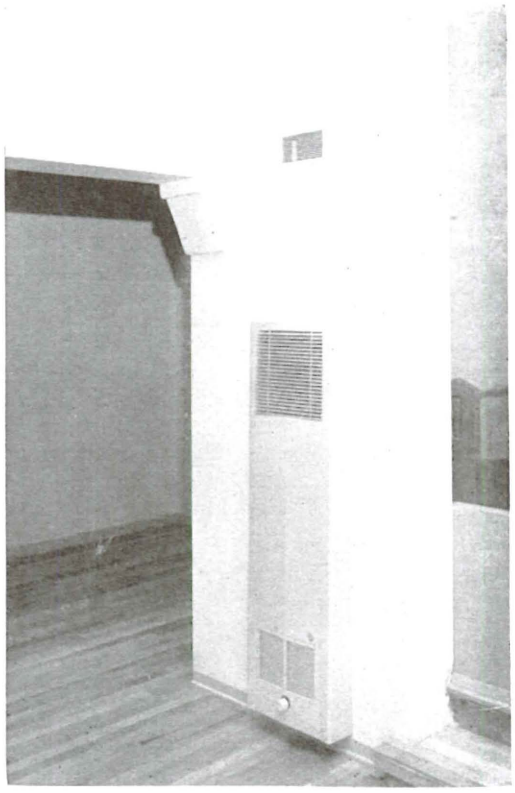
The "NarroWall" heater is installed in one simple operation.

The cutaway (above) illustrates the many features of Holly's new Secondary Heat Exchanger model. This design is said to make possible circulation of about 25 per cent more warm air, formerly lost through vent.

A scene in the shipping department (right) where "NarroWall" S.H.E. heaters are being packed in wirebound, prefabricated crates.

J. Stanley Johnson, president and founder (above left) and Karl Bedell, chief engineer, are discussing new product plans.

Chief management executives at Holly credit J. Stanley Johnson with being the steady force that holds the organization to an unswerving course of subordinating other considerations to product improvement. Mr. Johnson, however, is quick to emphasize that neither his nor any other individual's effort is responsible for Holly's successful growth. That success, he says, has resulted principally from the coordinated efforts of an experienced management team.



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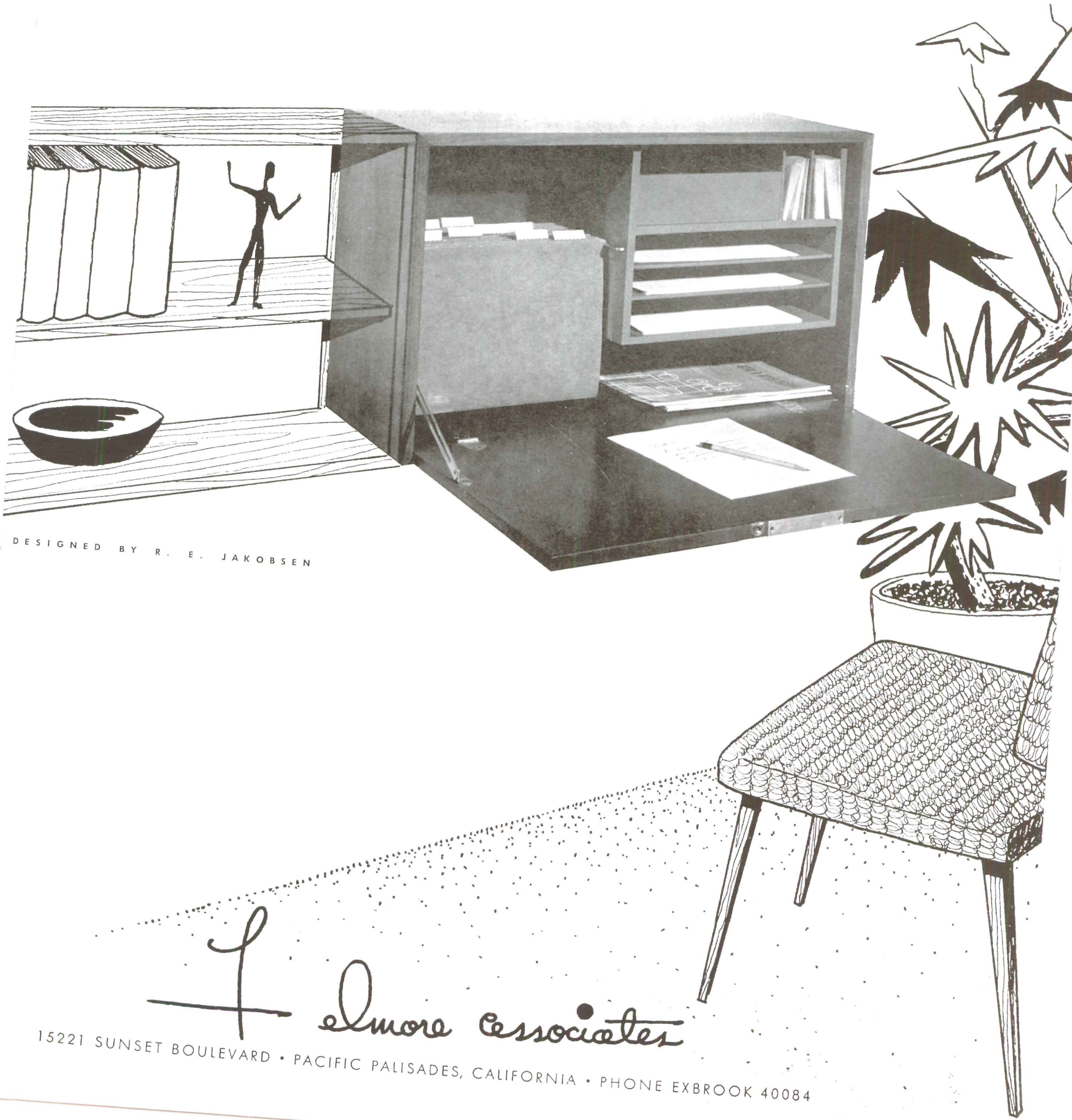

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